

MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XXXVII. No. 9.
WEEKLY.

BALTIMORE, MARCH 22, 1900.

\$4.00 A YEAR.
SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

PUBLISHED EVERY THURSDAY BY THE
Manufacturers' Record Publishing Co.
RICHARD H. EDMONDS, President.
OFFICE: MANUFACTURERS' RECORD BUILDING,
BALTIMORE.

RICHARD H. EDMONDS,
Editor and General Manager.

THOMAS P. GRASTY,
General Staff Correspondent.

SUBSCRIPTION, - - - \$4.00 a Year.
TO FOREIGN COUNTRIES, - - 25c. 6d. a Year.

BALTIMORE, MARCH 22, 1900.

Notice!

The Manufacturers' Record is in receipt of numerous complaints from Florida and Georgia from people who claim to have subscribed for a "Weekly Record" which they say they thought was the Manufacturers' Record. The receipts which they send show that a written receipt for one dollar is given "for Weekly Record for one year," and in some cases for "one set of knives and forks."

The Manufacturers' Record knows nothing about the matter; has never before heard of the man who is collecting this money, and does not know where the "Weekly Record" is published. So far as we know, there may be such a paper, but if anyone is doing this work, claiming to represent the Manufacturers' Record, he is a fraud. Southern papers will confer a favor by republishing this notice.

The Iron-Trade Situation in Great Britain.

The production of pig-iron in Great Britain for 1899 amounted to 9,305,319 tons, against 8,681,071 tons in 1898. Of this production 4,258,956 tons were forge and foundry iron, 3,990,282 tons hematite, 860,672 basic, 195,409 spiegel-eisen. The Iron and Coal Trades Review of London, referring to the production for the year and the stock of pig-iron on hand, says:

The total stocks of pig-iron in the hands of makers at the end of 1899 were extraordinarily low, amounting to only 192,396 tons. The stocks in public stores of Scotland, Cleveland and West Cumberland amounted to a further total of 528,321 tons. Total stocks under both heads reached 720,717 tons, which is only equal to 8 per cent., or over four weeks' make of 1899.

In Great Britain it is the custom to carry what would be considered in this country a very large stock of pig-iron, the warrant system there having been so largely utilized for many years as to keep in store from 1,000,000 to 2,000,000 tons, and the Iron and Coal Trades Review regards the stock of 720,000 tons as very small. In this country, though we make far more iron than Great Britain, such a stock would be regarded large, simply because we have pursued the policy of "living from hand to

month" in the iron business, not accumulating stock in storage warrant yards to the extent that British iron-makers do. Since January 1 the stock in England has been still further reduced, causing a material advance in price. Referring to this, Rogers, Brown & Co. write:

A fresh impetus to export trade has been given by the sharp rise in warrant iron in Great Britain. Middlesboro pig has risen 3s. within a week, with tendency still upward. For the first time in years it rules higher in price than Scotch pig, the latter having advanced less than 2s. The rise is due, apparently, to the rapid depletion of British stocks. But a few years since England and Scotland were carrying over 2,000,000 tons, which was regarded as a normal reserve. That has been steadily reduced until March 1 the total stocks stood at about 440,000 tons. The rate of shrinkage continues at 5000 to 10,000 tons per week. English authorities agree that only one thing restrains a very sharp upward movement on the other side, that is, fear of American competition. Bear operations keep their markets supplied with reports of collapse of American markets and impending heavy imports from America.

The Outlook for Iron.

The South, which has during the past three or four years held such a notable position in the unfolding of the history of the iron world, is showing no tendency to lose any of its prestige. The rather is it assuming even greater importance in calculations about the demands for iron and the means to meet them in the future. This fact is constantly being brought home to students of the situation at home and abroad. It is recognized and noted with emphasis in this week's issue of the Manufacturers' Record by Mr. J. Stephen Jeans of London, one of the world-authorities on the subject. He reviews in an elaborate article the outlook of possible supplies of material in European and American fields, discusses the relative importance of Bessemer and basic ores, and says:

To those who possess iron-ore properties, or whose manufacturing and general industrial interests are bound up in the Southern States, it should be a matter of satisfaction to know that the future is likely to have in store a vast increase of demand for the ores of which Alabama, Virginia, Kentucky and Tennessee possess such great stores—those specially suited for the basic-steel industry. It is probable that in respect of such supplies the South does not possess any special advantage over the Mesaba range, but the South does possess the unquestionable advantage of having the ores and the fuel in juxtaposition, while the Mesaba ores are nearly a thousand miles from the most convenient coal fields, and are, moreover, much farther from tidewater than the chief deposits of the South. If this means anything, it surely points to the fact that the South could hardly go wrong in throwing spirit and enterprise into the development of its basic-steel industry, which, in all countries alike, is so likely to become the steel business par excellence of the future.

As a basis for his optimism on the world's increasing demand for iron and steel Mr. Jeans mentions armaments, electricity and sanitation, and in conclusion says:

The number of minor demands is legion, and they are all pressing their claims, so that there is really good cause to suppose that we have reached a permanently higher

standard of iron and steel demands and of higher prices. In Europe, at any rate, it is not anticipated that iron ores, coal and coke will again be so low in price as they have been. If the United States can continue to supply those commodities in the future as cheaply as they were supplied up to about a year ago—well, so much the better for the United States.

But suppose the United States find it convenient to use more and more of their own supplies at home in manufactures to be sent to Europe and other parts of the world, how far better it will be for the United States and for the South, an important contributor to this country's supply of raw material, and becoming every year better equipped to contribute to the exports of American manufactures of iron and steel.

The South's Demand for Textile Machinery.

With \$125,000,000 to \$150,000,000 of capital invested in Southern cotton mills, the machinery for these mills has been purchased exclusively in the North and Europe. There is practically no textile machinery manufacturing business in the South, although one or two concerns do some little repair work. The Manufacturers' Record has repeatedly urged the importance of the development of textile-machinery business on a scale commensurate with the growing power and importance of the cotton-mill interests of this section. For the next ten years the South will probably add an average of not less than \$25,000,000 a year to its cotton-mill investments, which means the purchase of a vast amount of machinery. A portion of this at least ought to be made in the South, and a step in that direction is now being made by the proposed organization in Atlanta of a \$500,000 company with a view to manufacturing textile machinery. Capitalists from England and New England are reported to be identified with the enterprise. The demand for textile machinery promises to tax the capacity of all makers, and the established concerns, as well as those that may be started in the South, will doubtless have all the business they can handle.

Safety for Cotton

Col. Alfred B. Shepperson, the cotton expert of New York, is being commended for his advice to cotton-growers against speculative undertakings with an unplanted crop, which was published in last week's Manufacturers' Record. That commendation will be increased by reason of the additional suggestions which he offers this week. He criticises New York opinions about the cotton market, based upon a lack of knowledge of tendencies, and says:

The domestic buyer and the cotton-grower never do stand together, as the buyer always wants cotton to go lower and the grower wants it to go higher. How can they stand together except by chance? The sale in advance by the farmer would not prevent heavy receipts in the fall, for the people who buy of the farmer will sell for fall shipment against their purchases. They would

buy of the farmer simply to resell to some one else at a profit. The only thing to prevent a great pressure of cotton for sale in October and November would be a warehouse system by which money could be loaned for a good proportion of value and at low rates of interest, so that planters, instead of rushing their cotton to market for immediate sale, could put it in warehouse and borrow on it the money needed.

In the warehouse—the bonded warehouse—the receipts of which will be acceptable at any bank as collateral for loans for reasonable rates, is the opportunity not only for the cotton-grower, but for the banker, the merchant and anyone whose real permanent interests are closely allied with the prosperity of the farmer. The warehouse is a hobble upon the speculator, a balance for the market and a sure means of keeping a supply of ready cash in the community. Conditions of cotton today are especially favorable to the extension of the system of bonded warehouses for operation next season. Planters, bankers and merchants should not permit such an excellent opportunity to escape them.

The Real Negro Problem.

Men who have studied the race problem in this country from a practical standpoint have long recognized that its political and social phases are merely secondary, and that its germinal, basic feature is industrial. The question of social relations of the races in the South has remained in effect where it was originally, and where it will always remain in spite of pressure on the part of individuals who will commit themselves to all sorts of extravagances in following the logical guiding of diseased minds. The political question is rapidly being solved upon the same principle that led Massachusetts in the later fifties to lead in a revulsion from unrestricted male suffrage. The unseemly prominence given these questions by demagogism, ignorance, misdirected zeal or outright villainy has within thirty years but added to the difficulties surrounding the greater question now coming to the front, the place of the negro in Southern industry. That fact was brought out last week by Dr. George T. Winston, president of the North Carolina College of Agriculture and Mechanic Arts, in his testimony before a sub-committee of the industrial commission. He pointed out that "the most pitiful, and in some sense the most cruel, chapter in American history was the attempt to set up the emancipated negro slave as the political antagonist of his Anglo-Saxon master, dependent as he was upon the former master for food, shelter and employment, as well as for legal protection and friendly assistance in time of distress." When to such a condition is added that of the presence in the South of a horde of the newer generation never fortunate enough to have enjoyed the discipline of slavery, ruined by misguided attempts at education, filled with ambitions far beyond their capabilities and with pretensions in inverse proportion to their merits, the

task of the Southerners, who alone can lead in solving the problem satisfactorily, is almost appalling. It is enough to weaken the stoutest hopes.

The temper of the South, sorely tried as it has been already, but wonderful in its accomplishments against great odds, will meet its greatest trial when strain of industrial competition of the whites and blacks comes, if it be ever permitted to come. It will be a strain affecting not only the South, but the whole country, and therefore the whole country is interested in preventing it. As Dr. Winston said:

The real race trouble has not begun yet. It will come when the laboring white class will not want the negro to labor. It will come with bitter intensity when the Southern white laborer is arrayed against the Southern negro laborer in a struggle for employment; when white mill operatives who strike for higher wages are replaced by negroes. We will then see in the South what we lately saw in Panama, ILL., but with more intensity.

It will not be prevented, but will surely be hastened if the whites of the country continue to foster unduly, in their sincere desire to be philanthropic, the institutions in the South devoted to the training of the negro. If it does come whites and blacks must suffer, though it is hardly necessary to intimate which race will ultimately prevail. Still, the possibility of a clash removed, a tragedy may be averted by reasonable action.

The South must leave nothing undone that may strengthen its scant facilities for the education of its white youth to industrial pursuits. It has already institutions designed to that end, but rare is the case where equipment and accommodations are equal to the demands upon them. At the same time the South must encourage its youth in the idea that short-cuts to wealth and distinction are few; that the so-called learned professions are overcrowded; that the mass of men must make their living by working for others; that success in the most notable careers as employers is becoming more and more dependent upon the thorough acquaintance with details obtained through hard labor in the subordinate lines; that it is just as honorable to work with one's hands as to make a living in the professions upon the ills or necessities of others, and that handwork tells best when it is combined with headwork.

This spirit of the industrial South may be developed most rapidly and most effectively by the movement, advocated by the Manufacturers' Record, for the establishment of a great institution for the sole, definite purpose of training Southern youth for industrial careers, which will be at the same time a center for the propagation of the gospel of work. The South of itself may not be able to found such an institution in all its completeness, but its beginnings will undoubtedly be potent to direct attention in other parts of the country to the necessity it is intended to meet and to attract substantial aid. There are enough Southern-born men of wealth and influence living in the North and West to lead in a campaign for an endowment of it in connection with contributions from the South itself. There are enough Northern-born men vitally interested in all that concerns the welfare of the South to second promptly and richly the efforts of the South in a direction of help for the generation that must make the South or mar it.

The negro, however useful, if permitted to develop on suitable lines, is not essential to the South. At present

he has industrial opportunities there denied him elsewhere. Conditions forcing him into sharp competition with the whites will certainly remove the possibility of that competition. His departure from the South will bring him immediately into competition with white labor elsewhere. It is for the South to prevent the possibility of the competition and for the rest of the country in self-defense to aid the South in its work for civilization.

The dispatch from Atlanta, Ga., announcing that a conference of representatives of the Stove Founders' National Defense Association and of the Iron Molders' Union of North America has resulted in a decision for a general advance affecting 35,000 men in the wage scale of iron molders of 15 per cent. over the scale of 1898, is additional evidence of the fact that the wage-earners of the country are sharing in the practical benefits which the revival of industry has brought to manufacturers and other employers of labor. The accumulation of such evidence is not only scattering the congregations of the preachers of discontent, but is also depriving them of their favorite texts.

Tennessee Coal, Iron & Railroad Co.

The annual report of the Tennessee Coal, Iron & Railroad Co. for the year ending December 31 indicates something of the very great improvement in iron conditions, although the full improvement is not reflected by the earnings for last year, because a very large amount of iron had been sold ahead at the low prices prevailing twelve months or more ago. The present year ought to show profits of more than double 1899, as the company is now getting the benefit of the profitable market conditions of iron. It has sold very largely ahead for delivery during the year at prices that yield a very heavy profit.

During the year the company opened several new mines with a view to a large increase in its output of coal, and commenced the construction of several hundred additional coke ovens, some of which have been completed, and others will be in operation this spring and summer. Some months ago the property of the Sheffield Coal, Iron & Steel Co., consisting of three furnaces in Sheffield, 301 coke ovens and about 74,000 acres of coal land between Sheffield and Birmingham, with two mines in operation, were purchased by the Tennessee Coal & Iron Company, thus very largely increasing the property of this company and its output of coal, coke and pig-iron in the future. The most important matter treated by the annual report relates to the construction of the steel plant, and, partly in connection therewith, the rod mill, which will use part of the product of the steel works. With these great plants now in operation a market is created for a very considerable portion of the pig-iron product of the company's furnaces. Steel-making on a large scale is now a demonstrated success in the Alabama region. This advance movement in the upbuilding of the iron and steel interests of Alabama has marked a turning point in the history of that section. The experimental period in the development of Alabama's iron and steel interests has passed; the future is bright with the promise of abundant success and of great profits to those who have had the courage to make large investments in opening coal mines, building coke ovens and the construction of furnaces in that State.

If you wish to keep posted on the progress of the South, read the *Manufacturers' Record*. Price \$4 a year.

THE WORLD'S IRON TRADE SITUATION AND OUTLOOK.

By J. Stephen Jeans, Editor of the Iron and Coal Trades Review, London, England.

The year that has recently closed upon the iron and steel trades has in all respects been one of the most remarkable in the history of the world. In all countries alike it has been a year of abounding prosperity, founded on phenomenally large demands, vast schemes of industrial development and high prices. It has been distinguished from every former year by the universal character of the revival, by the prevailing increase of home demands in all the leading commercial nations, by the concurrent advance of many schemes of industrial expansion and national awakening, and by a general recognition of the fundamental importance of adequate supplies of iron and steel as the basis of material prosperity in a thousand different directions.

When last you did me the honor to invite a contribution from my pen on the iron-trade situation there was some apprehension lest the supply of pig-iron should fall behind the demand, and there were not a few who feared an iron famine. In this fear I did not concur. I showed that the resources of production were being largely increased in all the leading iron-producing countries of the world; that the demand was so phenomenally large that it was not likely to be permanent; that the upward movement of prices was likely to restrain consumption, and that if the United States did not make the same progress in the expansion of her export trade as in the previous year, there was still reason to expect that she would have a considerable surplus to send abroad.

Most of these anticipations have already been realized. Others are at this moment in process of realization. It is true that the pig-iron output of 1899 in the United States did not reach the figures at which I then computed it, namely, 14,000,000 tons, but it came within 380,000 tons of that figure, and much nearer to it than the computations of some recognized authorities even on your side of the Atlantic. So far as my computations of the increased output of pig-iron in other countries are concerned, those who do me the honor to compare my estimates with the now published figures will find that I had pretty accurately gauged the probable results.

So far as can be measured at present, the total output of pig-iron throughout the world in 1899 has been over 41,000,000 tons, an increase of nearly 5,000,000 tons on the previous year, of which the United States alone have contributed 13,620,703 tons, or about one-third of the whole. The advance made in the pig-iron output of 1899 over 1898 was greater than that of any previous year in the history of the trade, and represents an increase of nearly 10,000,000 tons in the consumption of iron ores.

In contemplating the probable demands of the current year and the conditions of iron supply, the most crucial problem is that which appeared to confront the trade everywhere a year ago, namely, to what extent will the iron ores available respond to the needs of pig-iron producers? Experience during the past year has proved that there is a much greater elasticity in the supply of iron ores than was expected. This elasticity has been much more marked in the case of the United States than anywhere else, the Lake Superior supplies alone having risen to over 18,000,000 tons, against less than one-half of that figure only a few years ago. Scarcely less remarkable has been the response made to the increased demand for iron ores by the mineral districts of Spain, which furnished more than 2,000,000 tons

in excess of the supply of 1898. The official statistics of other iron-ore fields have not yet been published, but nearly all of them have had a share in the increased consumption of the past year, and it may be taken for granted that practically the whole of them have been taxed to the utmost extent to furnish the raw material demanded by the iron trade of the world.

There must, however, come a point at which this process of expansion cannot be indefinitely kept up. Has that point yet been reached? If not, are we near to its attainment? In the United States, the Lake Superior region is expected this year to supply some 20,000,000 tons of iron ore, say close on 2,000,000 tons in excess of the output of last year. This, in view of the results of 1899, is not at all an improbable figure if the mechanical conditions of handling and transport can be overtaken. Spain can possibly increase her iron-ore output in 1899 by another million tons, but this process must shortly come to an end, as the Bilbao deposits are rapidly nearing entire exhaustion. Sweden is another important potential source of supply, which, however, is not generally available, as I have good authority for stating that all the ores which Sweden is in a position to furnish, including those within the Arctic circle, have been disposed of to the end of 1905, and considerable quantities have been bought up to the year 1912.

In Europe, therefore, we find that the most crucial question pertaining to the future is that of how far it may be possible to secure supplies of iron ore adequate to meeting the still phenomenal demands of pig-iron makers? This problem is complicated by two considerations—the first, that of the diminished resources of the Bilbao region, on which Great Britain and Germany have hitherto placed their chief reliance outside their own borders, and second, that of whether, and to what extent, the United States may enter into competition with European countries in seeking for supplies of ore in Spain and Sweden. As regards the former, my friend, Mr. Jules de Lazurtagui, one of the best-known men connected with the Bilbao iron-ore trade, has computed that at the present rate of depletion the iron-ore resources of that region will be entirely exhausted within the next fifteen years, and that within a much shorter period the supply will become appreciably scarce. There is, in fact, no likelihood that any reliance can be placed on the North of Spain as a source of supply for more than five or six years to come, although considerable quantities of ore may be forthcoming for a longer period. This, however, does not mean that the iron ores of Spain are to be exhausted within that time. On the contrary, Mr. de Lazurtagui, who has studied the whole question very closely, has made up his mind that there are still left in Spain over 800,000,000 tons of iron ores, of which only some 150,000,000 tons are suited for the production of Bessemer pig-iron, the great bulk of the remainder being too highly phosphoric to be fit for Bessemer purposes. Of the 150,000,000 tons of high-quality ores, much is so geographically situated that it cannot be mined and delivered in England or Germany at the prices that have ruled for Bilbao supplies, the great bulk of it being in the province of Leon, from 100 to 200 miles from the seaboard. Moreover, the Spanish government are not likely to let this ore be disposed of with the same unlimited restrictions as applied to the ores of Bilbao, since there is a growing pig-iron and steel

industry at home which the Spaniards desire to develop, and a large percentage of the total available supply is likely to be retained for that purpose. On the other hand, there is no likelihood of any scarcity for many years to come in the available supplies of phosphoric ores. Over 600,000,000 tons of such ores are believed to exist in Spain alone, of which a very large proportion could not be worked and sent abroad at a profit, though it might be utilized to make pig-iron on the spot with local fuel, of which there is sufficient abundance within ten to fifty miles of the ores. In this case there would be very little expense incurred for transport, and Spain might reasonably hope to compete with more western nations in making pig-iron, and possibly steel as well, for outside consumption.

Of one fact there appears to be little doubt. The available supplies of hematite or Bessemer ores is becoming increasingly scarce, and before very long they will cease to be counted on, at least outside of the United States. Great Britain, it is true, still produces of such ores well on to 2,000,000 tons a year, but the supply tends to diminish, and as it is, can only furnish about a tenth part of the pig-iron output of the country. Germany, France and Belgium have no Bessemer ores worth speaking of, and depend mainly on imports for such Bessemer iron as they produce. Sweden has still large available supplies of high-class Bessemer ores, but the ores on which foreign smelters mainly rely, those of Gellivare Kurunavaara, and Luossavaara, in Swedish Lapland, are for the most part phosphoric. Austria has still considerable supplies of Bessemer ores left in the Styrian Erzberg, but they are only suited for local consumption, and the most important iron works in the empire, those of Witkowitz, in Moravia, use local ores of a phosphoric description, while the next most important, those of Kladno, in Bohemia, depend entirely on local phosphoric supplies. Even Austria has to depend on outside supplies, for the magnificent new blast furnaces recently built at Trieste, on the latest American lines, have to go to the North of Spain for the bulk of their ore supplies, and to the North of England for their fuel. Russia need hardly be considered in this connection, because it is not likely that for many years to come Russian iron works will be influenced by the same competitive conditions that determine the course of the iron trade in other countries of Europe.

In view, therefore, of what has just been stated, it is evident that considerable changes may be looked for in the circumstances of the iron trade within no distant period of time. The main change is likely to be a substitution of basic for acid conditions of manufacturing pig-iron. In other iron, responsible inquirers and others who have been accustomed to specify hematite ores will now be required to accept basic ores and basic pig whether they like it or no.

So far as the United States are concerned, there is no room to doubt that there are more abundant supplies of Bessemer ores still available than are to be found in any other country, or, so far as is at present known, are at the service of any other country. If, therefore, Bessemer pig became the great desideratum that it has hitherto been in some countries, and notably in Great Britain, the United States would probably by and by be in a much better position to supply it on a large scale than any other nation. As it is, despite the prospect of near increase of cost, and perhaps of actual scarcity of supply, this description of iron has not risen materially higher than other

sorts, whether in the United States or in Great Britain. The average quoted price of Bessemer pig-iron at Pittsburg over last year was actually less than the average quoted price of foundry No. 1 pig-iron at Philadelphia, and in Great Britain East Coast and Scotch and Welsh Bessemer pig were only a few shillings above the quoted prices of Scotch foundry and Middlesboro forge iron over the greater part of the year. In Germany, which has practically no home ores suitable for Bessemer iron-making, and where the total production of such iron is not now more than one-sixteenth of the total iron output of the country, the quoted prices of Bessemer iron over 1899 varied from 5/ to 16/ above the corresponding prices of basic iron, although the output of the latter is considerably more than one-half that of the total make of the Fatherland. France and Belgium also produce increasing quantities of basic and diminishing quantities of Bessemer iron, and this tendency, in view of the fact that Bessemer ores must be imported, whereas basic ores are found either at home, as in the case of France, or close at hand, as in the case of Belgium—which draws most of its supplies from the adjoining Grand Duchy of Luxembourg—is certain to increase in the time to come.

The ascertained make of basic pig-iron in the principal iron-producing countries of the world was in 1899 as under, compared with 1898:

	1898.	1899.
Great Britain.....	780,028	860,672
The United States.....	785,444	985,033
Germany.....	4,020,700	4,424,052
France.....	1,500,000	1,750,000
Belgium.....	450,000	500,000
Totals.....	7,535,472	8,519,757

Here we find that the make of basic pig appears to have increased about 1,000,000 tons between 1898 and 1899, while a comparison of the above figures with the total make of pig-iron in the same countries for the same years shows that basic pig-iron is about 25 per cent. of the total production of the five countries tabulated. It is, in my opinion, exceedingly probable that within the next ten years the make of basic iron will rise to 50 per cent. of the whole, and that this advance will be mainly gained at the expense of Bessemer iron, which in the United States is now 60 per cent. of the total and in Great Britain 43 per cent. of the total make of pig.

The great bulk of the pig-iron made in Europe today is neither Bessemer nor basic, but forge and foundry qualities. Even the United States in 1899 produced 3,929,000 tons of such descriptions, this being the remainder obtained after deduction of the ascertained quantities of Bessemer, basic, spiegel and charcoal iron produced in that year. In Great Britain the make of forge and foundry iron in 1899 was 4,258,956 tons, which compares with 3,990,282 tons of Bessemer or hematite pig-iron made in the same year, while Germany in 1899 produced 3,087,000 tons of forge and foundry iron—including a small quantity of spiegel—out of a total of 8,029,305 tons of all descriptions. The relative output of all three descriptions in the three leading countries compares as under in tons:

	Hematite.	Forge and foundry.	Basic.
United States.....	8,202,778	3,929,000	985,033
Great Britain.....	3,990,282	4,258,956	860,672
Germany.....	516,950	3,087,000	4,424,052

The united output of forge and foundry iron by the three countries thus amounts to within 1,500,000 tons of the total corresponding make of Bessemer or hematite iron, and is about 5,000,000 tons in excess of the corresponding make of basic iron.

These figures are instructive, and not a little valuable, as a guide to the probable course of the iron trade of the future in

relation to special supplies of iron ores. They show in effect that 37 per cent. of the ores of iron used in the three principal iron-making countries are neither basic nor Bessemer, and do not require to meet the conditions imposed by either of the processes called by these names. In other words, they are not steel ores at all, but ores that are used to make iron suitable for forge and foundry requirements. But the figures also show that 63 per cent. of all the ores now used in the same countries are what may be termed special ores, that is to say, ores that require to meet specific requirements in order to fit them for one or other of the two great processes of steel manufacture, and in view of the enormous development of the steel industry, it appears to be clear that a definite increase of demand for such ores is likely to be met by a problematical increase of supply.

To those who possess iron-ore properties, or whose manufacturing and general industrial interests are bound up in the Southern States, it should be a matter of satisfaction to know that the future is likely to have in store a vast increase of demand for the ores of which Alabama, Virginia, Kentucky and Tennessee possess such great stores—those specially suited for the basic-steel industry. It is probable that in respect of such supplies the South does not possess any special advantage over the Mesaba range, but the South does possess the unquestionable advantage of having the ores and the fuel in juxtaposition, while the Mesaba ores are nearly a thousand miles from the most convenient coal field, and are, moreover, much farther from tidewater than the chief deposits of the South. If this means anything, it surely points to the fact that the South could hardly go wrong in throwing spirit and enterprise into the development of its basic-steel industry, which, in all countries alike, is so likely to become the steel business par excellence of the future.

It may reasonably be expected that before I close this article I should attempt to offer some suggestions as to the probable future of demand and prices. This, however, is a risky undertaking, and I do not claim to be any wiser than my friends and neighbors, although my business for a quarter of a century has been to watch and record the movements of the trade in different countries. Rather more than two months of the year 1900 have already passed into history. During those two months, so far as the figures are at command, the output of pig-iron has been considerably larger than that of the corresponding period of last year. In the United States the rate of pig-iron output has been nearly 1,500,000 tons a year in excess of 1899. In Great Britain the increase of output has been at the rate of fully 250,000 tons over 1899, and in Germany and Belgium the advance has been quite equal to that of the first two months of 1899. No one anticipates that the total make of pig-iron in 1900 will be under that of the previous year. Very few people expect that before the end of the current year there will be any material slump in prices. On the other hand, there is no general expectation that the prevailing boom will be continued at its present level much beyond the current year. It must not be overlooked that it has already lasted longer and has assumed greater dimensions than any previous period of prosperity. In Europe it began in the year 1896, so that before the end of 1900 it will have had a life of about five years, which is about twice the duration of the previous booms of 1872-74, 1879-81 and 1889-90. It is no doubt true that every boom has its own special genesis, and is to a large extent a law unto

itself. That law, in the present case, may be summed up in three words—armaments, electricity and sanitation. These shibboleths are still prominently to the front, and appear likely to remain so. The number of minor demands is legion, and they are all pressing their claims, so that there is really good cause to suppose that we have reached a permanently higher standard of iron and steel demands and of higher prices. In Europe, at any rate, it is not anticipated that iron ores, coal and coke will again be so low in price as they have been. If the United States can continue to supply these commodities in the future as cheaply as they were supplied up to about a year ago—well, so much the better for the United States.

BRIGHTNESS AT BIRMINGHAM.

Industrial Improvements Under Way or in Contemplation.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., March 20.

The iron market the past week was spotted. Some interests reported an increased inquiry, while others reported rather a quiet time. There were some concessions, not regarded as significant, in the lower grades of iron, but the higher grades were more firmly held. Sales of mottled iron at \$15.75 were admitted, while reports are current concerning a few sales at \$15.50. The most of the inquiries were for small and moderate lots, and all are still after as nearly delivery as they can get. The lots were of small volume, and the terms of sale strict cash. Deliveries on certain grades are still slow, and there is more or less of a swamping around to protect engagements. Production seems to be at a maximum for the present, as every effort has been made to keep each furnace engaged to full capacity. In some quarters some inconvenience has already been experienced from a loss of labor and the difficulty of replacing it.

During the last two weeks cables have been received every day asking for quotations, but resulting in only a nominal business. Their frequency attests the smallness of stocks on hand and the desire to replenish. Circumstances do not favor the trade just now, as freights have stiffened. Besides that, the deliveries wanted are undesirable. The Tennessee Coal, Iron & Railroad Co. blew in the furnace at Oxmoor, that has been for some time undergoing repairs, on Saturday. But in a short time we will have one, probably two, in the district to blow out for repairs. The directors of this company declared last week an accumulated dividend of 54 per cent. on the preferred stock and one of 2 per cent. on the common stock. This is the only dividend declared by this company since 1887, and is interpreted to mean that it has surmounted its difficulties and will hereafter be a regular dividend-payer. It never has heretofore been in such good condition financially as it is now, nor has its prospects ever been as bright. The Sloss Company last week also declared a quarterly dividend of 1½ per cent., to the gratification of all the interests here. It is an advertisement of the district and an encouragement to investors.

Negotiations are practically concluded for the establishment here of large plow works, which it is hoped will be in operation by August. They will commence on implements adapted to Southern agriculture, and will extend their business to Cuba, Mexico and Central America. Besides these works, President Baxter says in his annual report that negotiations are being conducted for the establishment at Ensley City of cotton-tie works, hoop works, tinplate works, steel-tube works, sheet and plate works. The industrial enterprises now at Ensley City represent a

capital of \$7,500,000, and including those in sight of it, \$10,000,000. The place is growing rapidly. In the past eighteen months property has advanced 200 to 600 per cent., depending on its character and location. Material cannot be supplied as fast as desired. Real estate people claim that 500 houses, if could be had, would find tenants within a week. The number now under contract and in contemplation approximates that.

The Woodward Iron Co. has just concluded a contract with the Birmingham Machine & Foundry Co. for a blowing engine for its furnace. It is said to be the largest one in the district. The dealers in machinery still report a fine business. One firm reports that it is installing the largest mining outfit in the district. Another is placing the outfit in the addition to the electric-power plant. New business firms are announcing, the latest being the hardware house of Echols-Smith Co. J. M. K.

Eastern Iron Markets.

[Special Cor. Manufacturers' Record.]

Philadelphia, Pa., March 20.

The events of the past few days show that those who are looking for a reaction and for duller times did not reckon with their host. The fact of the matter plainly is, that there is going to be a heavier demand for iron and steel for the spring than there was last year. The fact that so many large concerns have bought all the material they want for the first half of the year does not prevent the presentation of a very large amount of business from new and to a certain extent unexpected sources. One thing that we should be particular of just now is the increasing demands for railroad purposes of all kinds. The locomotive works are receiving inquiries from railroad managers all over the country wanting to know what they can do in the way of supplying locomotives. The companies have crowded the car-builders as far as they can, and bridge-builders are not willing to take any additional business. Bridge-builders still continue to place large orders for structural material, but they have got to pay the outside prices. The activity of the past few days has stopped this downward tendency of prices of plate iron, and it is now selling for a little more money than a week ago. Bar mills are all crowded with business, and prices which were threatened with weakness are now stronger. Refined iron is 2.20 and common 2.10. Special steel bars are 2.50. There is not much to say for pig-iron; prices remain \$24 to \$25 for No. 1 foundry, and \$19 to \$20 for forge; Bessemer and basic are hardly worth quoting, as they are all sold up. Steel billets are quoted at \$35 to \$36, and a big business would be done if manufacturers would agree to deliver here at \$34. Buyers, however, may be obliged to buy at makers' terms, as the market has taken an upward turn. Everything looks all right in every branch of the trade. The currency bill has stimulated confidence, and everything is going with a whirl. A number of companies organized last fall and winter to do business are now starting out making their specifications for material, which will soon be placed upon the market, and this means higher prices, because so many plants are oversold and cannot promise to take new business. The fact that orders for 10,000 tons of pig-iron from abroad were turned down within forty-eight hours means a good deal. We have nothing to complain about and everything to be pleased about. The merchant-steel manufacturers say they will hardly be able to take care of the demand which they expect to come from the Western agricultural-implement manufacturers.

We are also expecting to do quite an increased business in the Southern States on account of the booming cotton conditions.

THE NEW BANKING LAW.

Opinions of Southern Bankers About Its Effect Upon Their Business and Upon the South in General—The Possibilities of an Increase in New Banks.

The act of Congress allowing the establishment of national banks with a minimum capital of \$25,000 is receiving earnest consideration in financial circles, and already several State banks are reported as about to secure the charter under the new law, while it is understood that several national banks in various Southern cities will increase their capital.

The Manufacturers' Record has obtained the opinions of a number of Southern men connected with national, State and private banking institutions. Their opinions widely differ, and the reasons upon which their conclusions are based form an extremely interesting discussion. The statements follow in detail:

H. M. Atkinson, president Southern Banking & Trust Co., Atlanta, Ga.:

"I think that the recent legislation allowing the organization of national banks with a minimum capital of \$25,000 will be beneficial to this section of the country. It certainly will encourage the formation of national banks rather than State banks. There has been a considerable change in sentiment favorable to national banks already in the South, in my opinion. At least, a leaning towards them can be discerned at the present time as compared with the past. I consider that the change will have a good effect on the South, and is certainly one that will be felt for the good of all business interests in this section."

J. W. Griffiths, president Grenada Bank, Grenada, Miss.:

"I cannot see that the recent legislation enacted by Congress, authorizing the organization of national banks with capital stock of \$25,000, will or can be of material benefit to our State, especially this particular locality. We have no manufacturing interest, and but little commercial business, comparatively speaking. All our interests being purely agricultural, I cannot see where a national bank could be of any particular advantage, especially so in view of the fact that we now have ample banking capital invested in State chartered banks. I am of the opinion that every place now available in our State has a State bank, and as there are no special advantages to be derived from national banks, see no necessity for a change. I know of none in contemplation in this section."

John L. Williams, Richmond, Va.:

"As far as I can learn, the national banks are disposed to make the exchange of their government bonds into the new 2 per cents and avail themselves of their premiums for active business purposes. I exceedingly doubt whether there will be any considerable number of small banks that will care to avail themselves of the national-bank feature. I see nothing in the act to invite capitalists into business on that scale. The South wants local currency. A national bank is not a maker of currency or a secretor of the lubricant of commerce. It does not add a dollar to the money of its neighborhood. National banks were in their origin conceived and formed to force the people to lend their money to the government. They were not a growth or a necessity of peace and commerce and legitimate trade. They are suggestive of the financiering of Joseph in Egypt. They have resulted in govern-

ment control of banking and currency, and have been a source of corruption and financial demoralization. In the last ten years congestions, panics and paralyses have become familiar through the evil of their existence.

"The utilization and mobilization of wealth, character and credit are the great business of banks. Banks of issue can alone give us commercial freedom and health. National banks served a special purpose in an emergency. Their whole nature is force and restriction. The system cannot be reformed and modified on its false and despotic principle. It must be reformed altogether. All efforts to retain the national-bank system in our present condition will prove to be only patch-work and quackery. As long as it continues the cry for free silver and greenbacks or some other specific will continue. Our great country wants freedom in all things."

Robert J. Lowry, president the Lowry Banking Co., Atlanta, Ga.:

"Georgia is a peculiar 'State-bank' State. The number of State banks is 200; number of national banks, 19. You will perceive that State banks are largely in excess of national banks, and they have proved very strong and convenient, and under State charters the liability of stockholders is the same as that of national banks. As a proof of their stability, in 1893, during the panic, only three or four suspended, and of these all except one, I think, resumed. Out of the small number of national banks the percentage of suspension was very much greater. I think it will be of benefit to this section to have legislation as above, as banks of small capital will be enabled to procure currency up to par on the bonds deposited. This will be, in my opinion, very convenient, especially for the agricultural and commercial interest. I don't think it will be creating more banks than can do business at a profit.

"I don't know just now of any small banks that intend changing to national, but presume there will be quite a number. Some large State banks that I know of are arranging to go into the national-bank system. The planters have obtained a good price for their cotton, and money is easier than usual at this time of the year, and I believe there will be quite a tendency to change State banks into national banks so as to enable them to obtain currency under the new law. It is greatly to be hoped with the passing of this currency bill and settling of the question as to position of silver we will have no further disturbances from politicians and others in our financial matters."

D. A. Tompkins, the D. A. Tompkins Co., manufacturers, engineers and contractors, Charlotte, N. C.:

"The provisions of the new law are an improvement upon those of the old law. The privilege to issue bank notes to the par value of bonds held is an advantage. The privilege of establishing national banks in towns of less than 3000 population with a minimum capital of \$25,000 is also an advantage, in view of the other provisions of the law. The reduction of the tax from 1 per cent. to one-half of 1 per cent. where the new bonds are held is a distinct advantage. The practical retirement of the greenbacks by requiring gold for their reissue is an advantage. Taking it all in all, the provisions of the new law are distinctly an improvement upon the conditions that existed before the passage of the law. It is notable, however, that the new law provides no flexible feature for our financial system. When the limit of 100 per cent. is reached in issuing notes on the new bonds all relief is at once shut off.

"In my opinion, a much better law could

have been passed with gold as a basis, but considering that compromises are always necessary in Congress, the new law may be considered for the time being a good and advantageous measure. I hope to see the day when bonds as a basis of bank notes circulation will be entirely abandoned, and when national banks may issue notes under government control and upon the bank's assets. In that situation I think that \$250,000 ought to be the minimum capital of any bank, and I would permit branch banks wherever a national bank saw fit to establish one. This is practically the Canadian and Scotch systems, both of which work well, and from both of which we always get help when we have a tight squeeze with our inflexible system."

J. R. Gilliam, president the Lynchburg Trust and Savings Bank, Lynchburg, Va.:

"I am of the opinion that the change in the national banking law, so as to allow banks of \$25,000 to be established in towns of less than 3000 inhabitants, is a most excellent thing for the country and small towns. In this State there is no State inspection over banks operating under State charters, and, consequently, there are sometimes heavy losses sustained by communities in the way of bank failures. This to some extent would be curtailed if regular examinations were made, as provided for under the national banking law.

"I do not know of any banks that propose to change from State to national banks, nor do I know of any new national banks to be established with the minimum capital, but I have no doubt that the advantage of the system will commend itself to quite a number of existing institutions, and that changes will be made accordingly."

E. R. McShane, cashier Bank of Greenwood, Greenwood, Miss.:

"I can't see how it will be of any great advantage to this section of country. Banks are being established under State law just as fast as they are needed. I believe there will be a tendency to establish more banks than the business of the country requires, making the business unprofitable until the fact is fully recognized. I do not know of any banks that are contemplating a change. However, I believe that there will be some changes."

P. S. Lovell, Crowley, La.:

"I do not think the recent legislation relative to the formation of national banks will have any particular effect upon the commercial or other interests of the South, nor do I believe it will tend to create more banks than can transact the business offering. The Citizens' Bank of Jennings will probably take advantage of the law to become a national bank."

W. J. Edwards, president of the Chatham, Moore and Harnett Bank, Sanford, North Carolina:

"The new currency bill will, in my judgment, prove advantageous in many ways, and will be beneficial to every section, directly or indirectly, to the agricultural, commercial and manufacturing interests. I see no reason for its producing more banks than the country needs. On the contrary, it will, I believe, enable national banks to organize where they were before impracticable."

The Alabama Industrial and Scientific Society has elected for the year Col. J. A. Montgomery of Birmingham, president; John H. Hawkins of Rock Run, J. R. Harris of Birmingham, J. G. Moore of Birmingham, Charles J. Geohagan of Birmingham, J. M. McGarvin of Rock Run and J. H. McCune of Birmingham, vice-presidents; Eugene A. Smith of Tuscaloosa, secretary, and Henry McCalley of Tuscaloosa, treasurer.

STOCKS OF COTTON IN AMERICAN MARKETS.

An Analysis Showing That a Very Small Proportion Is Available.

By Col. Alfred B. Shepperson.

Compared with 13th inst., spot cotton is unchanged in Liverpool, and three-sixteenths of a cent higher in New York. The price here is at the highest of the season, nine and seven-eighths cents, while Liverpool's price of five and seven-eighths pence is an eighth of a penny below the high-water mark of 6th inst. There have been several reactions in the New York market for future deliveries, but the closing prices today are ten to fifteen hundredths of a cent higher than a week ago.

A question of great interest now is, whether the supply of unsold cotton in the United States will prove sufficient to satisfy the demands of the spinners of Europe and America who have not yet secured enough cotton for their requirements for the season. The matter of the stocks in our markets is therefore next in importance to the matter of the future receipts.

Usually, the stocks of cotton in the principal markets of the country should give some approximate idea of the supply available for the immediate demands of purchasers. It has been evident to me for some time, however, that the stocks as reported to the exchanges not only failed to give a fair indication of the available cotton, but were positively misleading, inasmuch as by far the greater portion of the stock thus reported had already been sold, and was merely awaiting shipment to foreign and American purchasers. Chiefly in consequence of the insufficiency of freight room, on account of the withdrawal of so many steamers for the use of the British government in connection with the South African war, a great deal of cotton is now held at our ports awaiting foreign shipment. It is likely that very few persons have a full conception of the quantity of cotton so held.

The New York Chronicle reported the stock of cotton at all United States ports on the 16th inst. as 905,000 bales, against 794,000 at corresponding time last year, indicating quite a liberal stock, and 111,000 bales more of available cotton than a year ago.

In reply to inquiries respecting the composition of the stocks of 16th inst. at the principal markets, I have received mail and telegraphic advices from thoroughly reliable sources—exchange officials and prominent merchants—which make it very clear that the quantity of cotton possible to be bought in these markets is infinitely less than would be supposed from the published figures of their stocks. It is perfectly fair to assume that the proportion of available cotton in the smaller markets of the country is no greater than in the markets concerning which my inquiries were made. The port stocks on the 16th inst. and the quantity unsold were reported to me as follows: Galveston, 3500 unsold out of stock of 108,700 bales; Norfolk, 5000 out of 40,900; Savannah, 3500 out of 122,500; Charleston, 1000 out of 31,500; Wilmington, 1000 out of 12,800 (9500 of Wilmington's stock will be shipped to Bremen by steamer Yearby on 22d inst.); Baltimore, 6000 out of 10,800; Philadelphia, 7000 out of 10,600. Stock reported at Brunswick, Ga., was 2600, and at Newport News 3100 bales, but every bale was sold and awaiting shipment, as there are no cotton dealers in either place. The stock at Boston was

called by the Chronicle 38,500 bales, but I am advised that only a small proportion of it was unsold, the most of it being simply in transit to Europe and Eastern mills, and the remainder was owned by nearby mills. My correspondents (than whom no one has better facilities for correct judgment) think the entire stock of Boston on 16th inst. was 8000 to 13,000 bales less than the Chronicle's estimate. There is no cotton exchange in Boston, and no figures respecting the stock of cotton are compiled by any commercial organization there. The New York Cotton Exchange has never taken any note of the estimates of stock in Boston, very properly assuming that it is either simply in transit or chiefly owned by spinners. The stock in New York on 16th inst. was officially reported as 142,599 bales, consisting of 58,657 in warehouses and 83,942 on docks, etc., principally in process of shipment (chiefly cotton passing through New York on "through bills of lading" to other points). Much of the New York stock is held against contracts for future delivery and future shipment, and it is thought that 15,000 bales would be a full estimate of the quantity which could be bought.

New Orleans telegraphs that factors claim 70,000 unsold out of stock on the 20th of 351,000 bales.

Mobile stock on the 20th was 16,000 bales, of which 8000 were unsold.

My advices from the most important of the interior towns respecting the unsold cotton of their stocks of 16th inst. are as follows: St. Louis reports 45,000 unsold out of stock of 73,000 bales, with 35,000 bales of the unsold cotton held considerably above present prices. Augusta reports a stock of 22,000 bales, of which 3000 are for sale and 11,000 are held for higher prices, while 8000 are sold and awaiting shipment. Memphis reports 36,000 bales unsold out of a stock on 17th of 77,000 bales. The 36,000 bales of unsold cotton are said to include about 6000 bales of low-grade and unmerchantable cotton. Houston, Texas, telegraphs today: "Not exceeding 1800 bales in first hands; balance of stock sold and awaiting shipment or held against contracts." The Houston stock on 16th was 56,700 bales.

The difference between the stocks at the various markets and the quantity reported to me as unsold is cotton which has been sold and is merely awaiting shipment abroad or to domestic points.

My correspondents generally report that the unsold cotton is held firmly, and much of it considerably above present prices.

The result of my investigations should give the public a better idea of the quantity of cotton immediately available and make it plainer why Southern markets continue so firm.

New York, March 20.

A. B. Kesterson of Cumberland, Tenn., is adding considerable new machinery to his Cumberland Gap Woolen Mills, which he has located in that town upon removal from Yellow Springs, at which latter plant Kesterson & Wright operated.

A dispatch from Pelzer, S. C., states that the wages of about three-fourths of the employees in the four mills of the Pelzer Manufacturing Co. will be raised on April 1. This is a voluntary advance.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

To Manufacture Textile Machinery.

A plan is now being promoted at Atlanta, Ga., for the establishment in that city of an extensive plant for the manufacture of textile machinery. It is proposed to organize the Southern Textile Machinery Co., with capital stock of \$500,000, and the leading citizens of Atlanta are taking an interest in the enterprise and subscribing liberally to the stock. The movement for this plant had its origin in the Business Men's League's project for a \$1,000,000 cotton factory, recently reported. In promoting that project it was demonstrated that the present increasing activity in cotton-mill building caused a demand for textile machinery far in excess of the supply. Mr. H. G. McKerrow of Boston, Mass., an importer of textile machinery of English make, became aware of this movement, and upon correspondence with the Business Men's League the plan for a textile-machinery plant as noted became active. Among the Atlantians interested are Messrs. Charles A. Collier, Hugh T. Inman, T. H. Martin, W. A. Hemphill, Oscar Elsas, Samuel Carter and J. W. English.

A \$125,000 Mill at Kosciusko, Miss.

The company that incorporated some months ago for the purpose of building a mill at Kosciusko, Miss., has completed all its arrangements and awarded contracts for the erection and equipment of plant. The Kosciusko Cotton Mills is the company's title, and C. L. Anderson is president; Walter Burgess, treasurer. During the week contract was given to Messrs. Lindemorr & Puckett for the erection of the buildings. They will include a main structure three stories high, 78x241 feet; boiler and engine-house 40x80 feet, and a warehouse. The cotton machinery will be 5000 spindles and 160 looms, contract for which was placed last fall, and will be ready for installation as soon as buildings are completed. The power plant will be a 500-horse-power compound condensing engine and boiler to suit. This plant will run 10,000 spindles, and it is the company's intention to increase to that number soon after the original plant commences operations. The initial plant will cost nearly \$125,000, at which amount the capital stock is now placed.

\$1,000,000 Mill for Gainesville, Ga.

The Pacolet Manufacturing Co. of Pacolet, S. C., will build near Gainesville, Ga., a cotton factory to cost about \$1,000,000. The Pacolet Company has purchased 850 acres of land located two miles from Gainesville, upon which the immense plant will be erected. It will include a main building five stories high, 130x525 feet, to house an equipment of 50,000 spindles and complement for the production of sheetings. Messrs. Lockwood, Greene & Co. of Boston, Mass., will prepare the plans and specifications, and the plant is expected to be in operation within a twelvemonth from its commencement. The mill will employ 1500 hands and produce daily 125,000 yards of standard sheetings; 30,000 bales of cotton annually will be required. The company's mill at Pacolet, S. C., runs 57,000 spindles and 2202 looms. Mr. Victor H. Montgomery of Spartanburg, S. C., will manage this extensive enterprise.

Griffin's \$20,000 Knitting Mill.

The \$20,000 knitting mill to be built at Griffin, Ga., as recently announced, has

been contracted for. The company has taken the title of the Griffin Knitting Mills and effected formal organization by the election of Douglas Boyd, president; E. H. Spivey, secretary-treasurer, and E. T. Booth, superintendent. J. J. Mangham, J. W. Mangham and J. D. Boyd are the others interested. Orders for machinery have been placed. The equipment will give a daily capacity of 100 dozen suits of underwear. The power will be supplied by a steam plant, forty horse-power.

Would Invest in a Mill.

Editor Manufacturers' Record:

Timmons ville, S. C., has a population of about 1200. It has a fine country surrounding, with about 12,000 bales of cotton tributary, and sells about 5,000,000 pounds of tobacco per year. There are no indebtedness and no property tax. It is located on main line of the Atlantic Coast Line Railroad Co. Two streams of water are about one mile each way from town. The town will release manufacturing enterprises for period of five years from all taxes. Timmons ville has \$35,000 which she wants to put in a cotton factory, and wants to secure foreign capital sufficient to erect and equip plant.

J. W. RAGSDALE.
Timmons ville, S. C.

To Manufacture Combed Yarns.

A mill for the manufacture of combed yarns will be located at McColl, S. C. This will be the third of its kind in the South. The plant will be built and operated by the Icenan Mills, to which company a charter of incorporation has just been granted. The capital stock is \$200,000, and the incorporators are Messrs. Charles Icenan, F. P. Tatum, Thomas B. Gibson, A. W. Morrison and A. K. Odom. They will make immediate arrangements for the erection of the mill, which will have 10,000 spindles and use only long-staple and imported Egyptian cotton.

A Bleachery Company.

Messrs. Charles Estes, Thomas Barrett, Jr., F. B. Pope and Landon A. Thomas, Jr., of Augusta, Ga., all experienced cotton-mill operators, have incorporated a company for the purpose of establishing a bleachery. The company takes the title of the Clear Water Bleachery & Manufacturing Co., and its plant is to be located at Clear Water in Aiken county near Aiken, S. C. The capital stock is placed at \$300,000, and the company is authorized to manufacture cotton goods, as well as to conduct a bleachery for treating that product.

North Carolina's New Silk Mill.

The Patterson Textile Co. has completed the building for its silk-manufacturing plant, reported last fall as to be established at Roanoke Rapids, N. C. The structure mentioned is two stories high, 78x268 feet, and the equipment of machinery is being installed now. The raw material to be worked up into marketable goods will be shipped to the mill from China, Japan and other silk-producing countries. The company expects to commence operations within thirty days; its capitalization is \$400,000. Sam Patterson is president.

For Textile Training.

Dr. George T. Winston, president of the North Carolina College of Agriculture and Mechanics Arts, expects that the building for the textile school of the institution will be completed by September. Forty students are now receiving textile instruction, and the new building, which will be fitted with mill machinery of all

kinds, will be for their use, and in it they will carry on the same kind of work that is done in the regular cotton mill. The building will be of brick, two stories high, 75x175 feet, and modeled like a cotton mill.

The Cotton Movement.

In his report for March 16 Secretary Henry G. Hester of the New Orleans Cotton Exchange shows that the amount of cotton brought into sight during the 197 days of the present season was 8,005,307 bales, a decrease under the same period last season of 1,753,844 bales; exports were 4,384,330 bales, a decrease of 1,659,254 bales; takings by Northern spinners 2,013,934 bales, an increase of 134,802 bales; by Southern spinners 954,989 bales, an increase of 85,700 bales.

A \$50,000 Knitting Mill at Henderson, N. C.

The Seaboard Knitting Mills of Henderson, N. C., will be organized for the establishment of a plant for the production of men's underwear. Leon L. Strause of Richmond, Va., has promoted the new company, and its capital stock is placed at \$50,000. The daily capacity will be 200 dozen suits. The complete equipment of machinery required has been purchased.

To Double Its \$60,000 Mill.

The Hartwell Cotton Mill will double its plant at Hartwell, Ga., which will make its investment about \$120,000. The present plant is one of 3000 spindles and 102 looms, the product being sheetings. J. D. Matheson is president of the company, and it is expected that contracts will be made for an early action in regard to this duplication of the plant.

Textile Notes.

M. B. Culpepper of Elizabeth City, N. C., is organizing a company to build a cotton factory to be capitalized at \$50,000.

Messrs. H. C. Reynolds, Burgess Little, J. E. Burkstresser and W. B. Reynolds of Montevallo, Ala., will incorporate a company to establish cotton and knitting mill.

Messrs. T. J. V. Park and F. B. West of Macon, Ga., contemplate the erection of a carpet factory, and it is said that they have ordered machinery for the enterprise.

The Beaumont Manufacturing Co. of Spartanburg, S. C., has increased its capital stock from \$60,000 to \$100,000. Its spindles now running number 3072. It is presumed that additions will be made.

C. L. Perkins of Columbus, Ga., has secured the required capital for the erection of a \$25,000 cotton mill. This mill will manufacture wadding and batting, utilizing in the process waste cotton from Southern mills.

The Willingham Cotton Mills of Macon, Ga., will expend about \$50,000 for new machinery. It has been decided to increase the spindles by 3028, which will give the company a total of 8208. The improvement is now being made.

Messrs. B. J. Reynolds, W. A. Lemly, A. E. Holton and J. J. Wallace of Winston, N. C., have secured subscriptions for the erection of a 10,000-spindle cotton mill, and will incorporate a company at once. The plant will cost \$200,000.

The Tillman Manufacturing Co. of Valdosta, Ga., reported last week as incorporated to build knitting mill, will have a daily capacity of 200 dozen garments. Estimates on the machinery required are now wanted. Address H. Y. Tillman.

D. P. Ferguson of Sparta, Ga., will organize a company to put in operation the

Sparta Cotton Mills. This plant was built at a cost of \$135,000, and it includes modern mill structure 50x150 feet, 200-horse-power engine, 5120 spindles, etc., for yarn production. Stock is now being solicited for the proposed company.

Messrs. W. W. Burgess, W. B. Smith, H. V. Westmoreland, J. D. Ashmore, John H. Wyatt, E. C. Bailey, W. E. Waldrop, John A. Robinson and L. A. Green of Greer Depot, S. C., have incorporated the Greer's Mill for the erection of a cotton factory. The capital stock is \$45,000, with privilege of increase to \$150,000.

The Anderson (S. C.) Yarn and Knitting Mills has changed its name to the Riverside Manufacturing Co. and increased its capital stock from \$50,000 to \$200,000. This company was incorporated some months ago, and, as recently stated in this department, intends to build a cotton factory of 5000 or 6000 spindles.

Messrs. A. H. Hodgson, J. M. Hodgson, J. Y. Caruthers and W. T. Bryon of Athens, Ga., will develop an extensive water-power near their city. It is said they will expend about \$100,000 for developments and the erection of an electrical plant to transmit the power for operating a woolen mill they will build. About 500 horse-power will be available.

A dispatch from Jackson, Miss., states that it is likely that the board of trustees of the State Agricultural and Mechanical College will accept the offer of Mr. D. A. Tompkins of Charlotte, N. C., to furnish free the plans and specifications for the textile school at the college, provision for which has been made by the legislature in appropriating \$40,000 for the purpose.

A company with capital stock of \$100,000 will be organized at Fort Smith, Ark., to build a cotton factory. At a preliminary meeting held last week over \$30,000 was subscribed and directors were elected. Messrs. George T. Sparks, J. B. Williams, William Blair, W. J. Murphy, H. B. Salls, J. W. Patrick, J. D. Oglesby, T. C. Davis and H. E. Kelly are the directors.

The Bonnie Cotton Mills, previously reported as proposed at Kings Mountain, has filed articles of incorporation. The incorporators are Messrs. J. S. and W. A. Mauney, Jas. A. and W. A. Ware, M. M. Carpenter, J. H. White, S. P. Goforth and Chas. K. Gould. Capital stock is \$100,000, and company will soon contract for buildings and machinery. J. S. Mauney will be president.

A \$100,000 stock company will be organized at Griffin, Ga., for the erection of a cotton mill, probably to manufacture yarns. The capital has been subscribed. Full details as to company and mill are now being decided. Col. B. N. Barrow has secured subscriptions for the entire capital. W. J. Kincaid, who is already president of three mill companies at Griffin, will be offered the presidency.

The Oxford (N. C.) Cotton Mill Co. has been organized, with capital stock of \$125,000, for the erection of a mill, and the president states that work will be commenced on the plant at once. J. G. Hall has been elected president, and C. J. Cooper, treasurer. The directors are J. S. Brown, J. M. Currin, E. T. White, Dr. S. H. Cannady, J. P. Bullock, H. G. Cooper, W. B. Ballou, all of Oxford, N. C.; George W. Watts and B. N. Duke of Durham, N. C. Inquirers should address the president.

The company proposed to build a cotton mill at Waxahachie, Texas, has organized as the Waxahachie Cotton Mills. The capital stock is \$100,000. Officers have been elected as follows: President, E. A. Du Bose; L. C. Todd, secretary; J. H. Miller, treasurer; directors, Messrs.

Du Bose, Miller and Todd, T. A. Ferris, S. P. Skinner, J. M. Patterson, D. G. Thompson, R. K. Erwin, B. F. Forrester, Osce Goodwin and M. B. Templeton. The company will arrange for erecting mill this summer.

The company noted last week as to build a cotton mill at Tennille, Ga., has effected permanent organization, electing J. W. Smith, president; H. M. Franklin, vice-president; J. A. McCrary, treasurer; Izzie Bashinski, secretary, and W. S. Witham (of Atlanta), financial agent. The directors are Messrs. J. H. Arnall, W. M. Kelly and the officers named. The company will make immediate arrangements for the erection and equipment of its proposed 3000-spindle mill. About \$60,000 will be the plant's cost.

Waco, Texas, March 16.

Editor Manufacturers' Record:

The Cotton Ginners' Journal of Waco, in its March issue, says:

"The Journal does not operate, nor has it any interest in ginnery or compress; consequently what it may say about bagging and ties is entirely disinterested. It is the consensus of opinion, as voiced by ginners, compressors and buyers, that the bagging and ties furnished for the crop of 1899-1900 were perhaps the most ordinary of many, many years. Many ginners go further and say, 'the poorest we ever used.' Especially was there complaint of the jute bagging which the 22,000 square-bale ginners in ten States were compelled to purchase and use. The word 'compelled' is used advisedly, and everybody knows it is the right word in the right place. It is described as a very defective grade, and square bales wrapped in this bagging fared badly. It is openly charged that the sorry bagging was directly responsible for a large per cent. of damage occurring to square bales, resulting in reclamations under the head of 'country damage.' It is a fact, too, that by reason of the flimsy bagging the square bale suffered more of discredit than it would have met wrapped in sound, strong bagging. As the ragged, bizarre-looking bales lay on railroad platforms or on wharves they were pointed at in derision with the remark, 'that is the way the square bale goes to market. Contrast such a package with the neat, burp-covered round bales.' Friends of the square bale were often disgusted. One man whose firm handles perhaps a million bales every year said in his disgust: 'It looks like the manufacturers of the bagging used this year have a grudge against the square bale. If they had been scheming how to help the round and discredit the square bale they could hardly have chosen a more effective way of doing so than by furnishing us the common bagging of this season.'"

And yet the square-bale compress combine people are trying to make the farmers believe that the only thing needful to produce a perfect bale is to ram cotton down in 24x54-inch press-boxes and cover it with this sort of stuff. After two years of talk about their panacea, the compress combine has accomplished little or nothing of any value to the men who raise cotton. We understand that Mr. Hamilton, the compress combine's agent, reported to his employers from Liverpool late in January of this year that the square bales he had seen along the docks of that port were in disgraceful condition.

The round-lap-bale people are not saying much, but their works are running night and day turning out baling presses which will be installed before the beginning of the next cotton season. The American Cotton Co. this year will probably double the number of round-lap presses in the South.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

TO SHORTEN ITS ROUTE.

The Southern to Reduce Its Time Between New York and Florida by a New Line in South Carolina.

Although the Southern Railway Company completed a new line between the North and Florida last year, which gave it a short route to the principal winter resorts, the company has determined to further decrease the mileage by constructing another cut-off in South Carolina. The Manufacturers' Record is officially informed that surveys for the new line are now being made, and that the company expects to build it this year in time to have it ready for the winter business of 1901. The survey extends from Allendale to Hardeeville in the extreme southeastern section of the State, a distance of about fifty-four miles. The survey is in nearly an air line between the towns mentioned. At Allendale the extension would join the Carolina Midland division of the Southern, and at Hardeeville it would connect with the Plant system. The present route is by way of Allendale to Yemassee, S. C., and thence to Savannah, the tracks of the Atlantic Coast Line and Plant systems being used beyond Allendale. The proposed extension will reduce the distance about twenty-five miles, making the difference in time fully forty-five minutes.

As readers of the Manufacturers' Record are aware, the Southern constructed about thirty-two miles of line between Columbia and Cayce's last year. With the extension contemplated the company will have built nearly 100 miles of new line in South Carolina at a cost of about \$1,000,000 to give it the shortest route between New York and Florida.

Kansas City to the Pacific.

The northern portion of the new railroad system which A. E. Stilwell proposes constructing between Kansas City and tidewater on the Gulf of Mexico is called the Kansas City, Oklahoma & Mexico Company, which has secured a charter in Oklahoma Territory. This company is capitalized at \$3,000,000. In addition to Mr. Stilwell, a number of prominent business men of Kansas City, as well as other Western towns, are included. They include W. A. Rule, H. C. Ward, C. N. Atkinson and Edward L. Massie of Kansas City, W. C. Edwards of Larned, Kans., and A. C. Springs, W. K. Criley and H. K. Ricker of El Reno, Oklahoma. The Kansas City, Oklahoma & Mexico line, it is estimated, will be 200 miles in length, extending from Augusta, Okla., to the Red river.

The title of the principal company, which was recently described in the Manufacturers' Record, is the Kansas City, Mexico & Orient Railroad Co. Its route is from Kansas City southwest through Indian and Oklahoma Territories, Texas and the Mexican republic. It will connect at Chihuahua with a railroad which, it is understood, is to be built from this city to Topolobampo, on the Gulf of California. The principal company is capitalized at \$27,000,000. As readers of the Manufacturers' Record are aware, Mr. Stilwell was the principal promoter of the Kansas City, Pittsburg & Gulf, and its completion was largely due to his ability and energy.

West Virginia Electric Line.

In a recent issue the Manufacturers' Record referred to an electric railroad which is being promoted between Mount

Carbon and Coalburg, W. Va. In a letter to the Manufacturers' Record E. W. McCormick of Montgomery, W. Va., manager of the Kanawha Electric Co., writes that it is expected to complete the road between Mount Carbon and Handley, a distance of seven miles, by July 1. The entire length of the line will be eighteen miles. Relative to the enterprise Mr. McCormick writes as follows:

"The company has been incorporated under the laws of West Virginia, with G. W. Champ, M. J. Simms, B. H. Early, C. W. Dillan and myself as incorporators, with a capital stock of \$100,000. We propose to issue a like amount of first mortgage 5 per cent. 20-year bonds, to be secured by a mortgage upon our property. The population along this line is estimated at 20,000. There are along the line of this railway eleven producing coal mines, and adjacent to the road are eleven more, making a total of twenty-two mines from which to draw freight and passenger business. We have been granted the right of way by the county courts of Fayette and Kanawha counties, through which we pass. We have also secured the necessary right of way to cross private property. The parties interested in the construction of this road are among the largest and most influential business men in this section."

An Important Extension.

A dispatch from Johnson City, Tenn., is to the effect that the East Tennessee & Western North Carolina Railroad Co. has again been considering the proposed extension from Cranberry to Lincoln, N. C., and that it will probably be constructed. This extension has been referred to in the Manufacturers' Record in detail. It was proposed several years ago as a portion of a new route from the coal and ore district of East Tennessee to Wilmington, N. C., or some other seaport on the Atlantic coast. By constructing from Cranberry to Lincoln a connection would be made with the Carolina Central division of the Seaboard Air Line, which terminates at Wilmington. It is understood that such a line was surveyed when the matter was first agitated. The estimated distance is seventy-five miles. At present the East Tennessee & Western North Carolina extends from Johnson City to Cranberry, a distance of thirty-four miles. It is controlled by Philadelphia and Southern capitalists, Gen. R. F. Hoke of Raleigh being president of the company.

Sale of Kansas City, Pittsburg & Gulf.

The Kansas City, Pittsburg & Gulf Railroad has been sold at Kansas City by order of the court to Silas W. Pettit of Philadelphia, counsel for the Philadelphia reorganization committee of bondholders. It is understood that the reorganization will be completed as soon as possible, as the property has been formally transferred. According to a statement of Mr. Pettit, the new company will operate only the portion of the system between Kansas City and Sabine Pass, with the terminals at each end of the route. It is understood that the security-holders have selected a president, but his name has not been given out.

The main line of the Kansas City, Pittsburg & Gulf is 786 miles in length, with several branches, the total aggregating about 850 miles. It was opened between Kansas City and Port Arthur in September, 1897, and was placed in the hands of a receiver in April of last year.

Southern Railroad Earnings.

The report of railroad earnings for January again indicates the increased traffic of Southern lines. In the twenty-nine

roads reported by the Financial Chronicle, there is an increase over January, 1899, of 33.41 per cent., while the Southwestern lines show an increase of 30.21 per cent. These figures are only exceeded by the trunk lines and the coal roads, but the latter group cannot be fairly included in the comparison, as the month of January is by far the best in coal transportation business, owing to the winter season. It is noticeable that in the lines showing increases of over \$50,000 in net earnings seven are in the South. They include the Louisville & Nashville, the Norfolk & Western, the Illinois Central, the Yazoo & Mississippi Valley, the Savannah, Florida & Western, the Nashville, Chattanooga & St. Louis, the Southern and the Southern Pacific.

Russell Harding as Manager.

The announcement is made that W. B. Doddridge, general manager of the Missouri Pacific Railway Co., has resigned, and has been succeeded by Russell Harding, who has been acting as vice-president of the St. Louis Southwestern. Mr. Harding has been associated for a term of years with railways in the Southwest, and for several years was also division superintendent of the Great Northern Railway. Since his connection with the St. Louis Southwestern he has carried out to effect a number of notable improvements, and it is understood that his appointment is in the nature of a promotion and a recognition of his marked ability. F. H. Britton has been appointed manager of the St. Louis Southwestern to fill the vacancy caused by Mr. Harding's appointment.

To Be Extended.

It is now announced that the St. Louis & North Arkansas Railroad, recently referred to in the Manufacturers' Record as to be built between Eureka Springs and Harrison, a distance of fifty miles, is to be further extended into the mineral section of Arkansas, terminating at Yellville. The promoting company has already let the contract for the first section, which is expected to be completed by October 1. With the extension to Yellville the road will be 138 miles in length, it is estimated, and traverse the White river mineral deposits, where zinc beds are known to exist, as well as other valuable metals. John Scullin of St. Louis is president of the railroad company, which is said to include Hon. Powell Clayton and R. C. Kerens of St. Louis.

Power from the Susquehanna.

It is reported that the United Railways & Electric Co. of Baltimore is negotiating with the view of securing power from the Susquehanna river to be used to operate its street-car system. It is understood that the company has recently had examinations made of the power which can be developed from the river near Conowingo. A company was formed several years ago to secure this power by the construction of a dam and a series of turbine wheels, but the project has not as yet been carried out. It is estimated that at this point some 30,000 or 40,000 horse-power can be developed.

To Shorten Its Route.

A charter has recently been secured in West Virginia for a company called the Patterson's Creek & Potomac Railroad Co. It is understood that this is a plan of the Baltimore & Ohio which will give it a more direct route than at present on its Cumberland division. In connection with this line and the road recently surveyed from Fairmont, W. Va., to the Ohio river, it is stated that a route would be completed which would shorten the

Baltimore & Ohio line between New York and Chicago about seventy-five miles and decrease the time for running both freight and passenger trains between these cities.

Extending the South Georgia.

In a letter to the Manufacturers' Record Mr. J. W. Oglesby, president of the South Georgia Railway Co., writes that the bond issue proposed by the company will amount to \$6000 for each completed mile. The bond issue will bear 7 per cent. interest, and has been principally taken by the stockholders of the company and local capitalists. The bonds are to finance the extension of this line from Quitman, Ga., its present Southern terminus, to Tampa, Fla., a distance of about 200 miles. F. J. Spain is trustee for the bonds at present.

Along the Red River.

The Shreveport & Red River Valley Railroad Co., which has its line in operation between Shreveport and Luella, a distance of seventy-three miles, has let a contract for a further extension from St. Maurice to Colfax. Surveys are now being completed for this extension, which will be twenty-five miles in length. The extension will probably be by the way of Boyce, La., as the citizens of the town have offered special inducements for the railroad to cross the Red river at this point.

May Extend to Richmond.

The report is current that the Norfolk & Western Railway Co. has decided to have its own line to Richmond, and that it will construct an extension from Petersburg to Richmond in the near future. At present its trains are operated over the Atlantic Coast Line between the cities named. The extension, if built, will be about twenty-five miles long. It is understood that the increase in traffic of the Norfolk & Western has rendered an independent line necessary.

For Galveston Terminals.

Mr. C. P. Huntington has purchased the property of the Southern Compress Co. at Galveston, Texas, comprising three street blocks. The price paid is reported to be \$112,500. It is understood that it will be used as a portion of the terminals of the Southern Pacific at Galveston.

Railroad Notes.

The Richmond Passenger & Power Co. of Richmond, Va., has made arrangements to secure twenty additional cars for its service in that city.

The United Railways Co. of Baltimore has ordered fifty-five cars for use on its lines. A portion of them have been completed and shipped to Baltimore.

The Calvert, Waco & Brazos Valley Railway Co. has purchased three additional locomotives and made arrangements to secure 350 freight cars for its line.

The Houston, East & West Texas Railroad Co. has recently purchased three locomotives of the Brooks Locomotive Works, which will be used in hauling passenger trains.

The Florida Central & Peninsular Railway Co. has re-elected Mr. John Skelton Williams, president, and Messrs. E. St. John, John A. Henderson and D. A. Maxwell, vice-presidents.

The Metropolitan Street Railway Co. of Kansas City has determined to secure 100 additional cars for use on its lines in the city and suburbs. Bids have been recently received for their construction.

At the annual meeting of the Richmond Locomotive and Machine Works the pres-

ent officers were re-elected. Joseph Bryan is president; J. J. Montague and William R. Trigg, vice-presidents.

At the annual meeting of the Macon, Dublin & Savannah Railroad Co., A. P. Soper of Chicago was elected president; H. M. Hughes, vice-president, and James T. Wright of Macon, Ga., general manager.

The Illinois Central Company has established a steamboat service on the Green river, in Kentucky, and a regular schedule is now in effect between the principal towns on the portion of this stream which is navigable.

It is announced that the Clyde Steamship Co. has finally determined to establish a regular service between Charleston and Providence, R. I. It is stated that the first vessel will be loaded in the near future, and that as many steamships will be put on the line as the trade demands.

The Shelbyville & Bloomfield Railroad has been sold to P. Booker Reed, acting for bondholders, by order of the court. This line extends between the towns named in Kentucky a distance of twenty-six miles. It connects with the Southern system, and is operated by this company.

The Atlantic Coast Line, it is understood, has offered to buy the stock of the Richmond, Fredericksburg & Potomac Railroad. The Coast Line utilizes the Richmond, Fredericksburg & Potomac for its train service between Richmond and Quantico, Va., where it connects with the Pennsylvania.

The steamer Pennsylvania, recently completed at Chester, Pa., for the New York, Philadelphia & Norfolk Railway Co., has arrived in Hampton Roads and has been placed in service between Portsmouth, Norfolk and Cape Charles. The steamer was recently described in the Manufacturers' Record, and is one of the finest of the fleet operated by the railroad company. She cost \$250,000.

The Birmingham, Selma & New Orleans Railroad, extending between Selma and Martin's Station, Ala., a distance of twenty miles, has been sold to F. M. Abbott of West Point, Miss., who is said to represent a Northern syndicate. At Selma the road connects with the Louisville & Nashville and other lines. It is reported that it may be extended to Linden, Ala., and that it may become a part of the Mobile & Ohio system eventually.

Jottings at the Ports.

The steamship Greatham has cleared from Baltimore with a full cargo of corn for Alexandria, Egypt. The corn was loaded in bags.

Nicholas G. Zacher of Alexandria, Egypt, in a letter to the Manufacturers' Record, suggests as an obstacle to the extension of American trade in Egypt the unreasonable demands of American exporters.

Two vessels recently cleared from Newport News, Va., with about 8000 tons of coal for foreign ports. The coal is consigned to the British Admiralty. One cargo has been sent to Marseilles and another one to Montevideo, S. A.

In addition to the purchases of provisions, fodder and mules, the British government has also bought a large number of horses in the Southwest for its cavalry service in South Africa. This live-stock is being sent to New Orleans for export to Cape Colony.

In a letter to the Manufacturers' Record Ricardo A. Byrne of Matanzas, Cuba, says that, having represented American manufacturers for years, he desires to increase the number of such connections, and will open offices in Havana, Cardenas and elsewhere in Cuba.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record.

Baltimore, Md., March 21.

The movement in nearly every department of the local lumber market during the past week has been of a fairly active character. The general conditions surrounding the lumber industry at this port are very favorable for a good spring trade, and under more favorable weather considerable lumber is beginning to move. A very strong tone prevails in hardwood, and the demand lately from out-of-town buyers and local manufacturers is improving. Oak, ash, poplar and other commercial woods are all in limited supply, and dry lumber will command outside figures. Considerable green lumber is also selling, and stocks at all milling sections are considerably reduced. Hardwood exporters are not doing a heavy business, freight rates are still above shippers' views, while prices on the other side of the water are steady at unchanged rates. The trade last week in North Carolina pine was moderately active, and in air-dried lumber sales were confined to small lots to boxmakers and others. The demand for kiln-dried North Carolina pine is, however, quite pronounced, and late sales show prices above the regular list. Considerable inquiry has been made by dealers in Great Britain and the Continent recently, and a fair volume of actual business is being developed. White pine is firm, with a good demand and moderate supply. Cypress is quiet and steady.

Charleston.

[From our own Correspondent.]

Charleston, S. C., March 19.

This port has during the present year shown more activity in the moving of all wood than at any time for several years past. Both here and at Georgetown the movement at present indicates a very prosperous trade during the spring and summer months. The mills at Georgetown are having a heavy business in cypress and yellow-pine lumber, and the demand from the usual sources taxes manufacturers to the utmost capacity of their mills. Numerous inquiries, both domestic and foreign, are coming in daily, but holders of lumber are generally cautious, and are not filling many large bills, preferring to hold for better prices and for a prospective demand. Shipments during the past week aggregated over 3,500,000 feet for New York, Baltimore and Manchester, England. The shipments of lumber from September 1, 1899, until March 16, 1900, aggregate 26,369,441 feet domestic and 1,720,000 feet foreign, or a total of 28,089,441 feet, against 14,425,550 feet. Lumber freights continue steady, with a moderate offering of vessels of desirable tonnage.

Savannah.

[From our own Correspondent.]

Savannah, Ga., March 19.

Everything in lumber circles here shows a great degree of activity, and throughout Southern Georgia the lumber industry was never in better shape. The demand for lumber exceeds the supply, and in many milling sections manufacturers are far behind in their contracts. Timber lands are advancing in price, and investors are scouring the State for desirable locations for the establishment of saw-mills and other woodworking plants. One of the largest contracts for lumber was closed last week, when the Georgia Lumber Co. of this city sold to the Morse Dry-

Dock Co. of New York 3,000,000 feet of lumber to be delivered in ninety days. The lumber is intended for the construction of one of the largest dry-docks in the country. Savannah possesses many advantages in furnishing lumber; shipping facilities are good, and a large section of the finest timber is to be had at short notice. There are other large contracts spoken of in the near future, and several companies here have a number of inquiries from various sections for bills for prompt delivery. The coastwise and interior price-lists on lumber and timber are well maintained, and it is probable that values will go higher during the spring months. At Darien business is better than usual; receipts of timber from the upper streams have been liberal, and there is a good foreign demand for hewn and sawn timber. There is also a good business in lumber with domestic ports. The movement in lumber at Brunswick continues to show a heavy volume of trade in all lines of the lumber and timber business, and the foreign demand is showing up much better as the season progresses. The foreign exports of sawn timber for February from this port aggregated 5,932,000 feet, hewn timber 631,692 feet, lumber 1,636,000, joists and scantling 293,000 feet and shingles 23,000. The coastwise shipments for February were very heavy. Freights continue steady, with a moderate offering of vessels. Rates for ties Brunswick to New York 23 cents, and lumber on deck \$7.50 Savannah to New York, with ties 20 cents and lumber \$7 to \$7.25.

Mobile.

[From our own Correspondent.]

Mobile, Ala., March 19.

The general features of trade at this port were never of a more encouraging character, and at no time in the history of this city has there been so much prosperity in all avenues of commerce and industry. The timber and lumber industry of the port continues to show increased activity as the season passes, and prices are ruling firm and higher for both hewn and sawn timber, while the list of lumber values indicates a higher range. The demand for lumber was never better, and shipments last week aggregated 4,044,683 feet, of which nearly 2,000,000 feet went to Cuba, 500,000 feet to Northern ports and the balance to Great Britain and Continent. The Cuban trade in lumber is now of considerable volume, as shown by the weekly shipments, and will eventually be much larger than at its best period before the Spanish-American war. Reports from milling sections in this State and adjacent points in Florida are all of a most encouraging character. Stocks show but little accumulation, and in a few weeks mills will likely be taxed to their utmost capacity to fill orders. Prices all along the line are firm and hardening. With the brisk aspect in the lumber trade, that of timber is improving. Prices are higher, sawn timber being quoted at 16 to 16½ cents per cubic foot, 40-foot basis; hewn timber, 15 to 15½ cents per cubic foot; hewn oak, 15 to 18 cents per cubic foot, and hewn poplar, 12 to 13 cents per cubic foot; pine saw logs, \$7 to \$10 per 1000 superficial feet; poplar logs, \$8, and oak logs, \$8 to \$12 per 1000 feet. While the activity in all wood products is of such a decided character here, there is at Pensacola a most promising trade in the future. Business in all lines of lumber and timber at that port is good, and shipments for the current month will be very heavy. The labor difficulties, which have retarded operations in timber for some weeks past, are now adjusted, and the knights of labor have returned to work. Receipts of timber from Ferry Pass will now be much larger, and will regularly

supply the export demand. Among the charters last week were the British steamer Wildcroft, 1916 tons, from Pensacola or Mobile to picked ports in the United Kingdom with timber at 110/4, and British steamer Roddam, 1506 tons, from Pensacola to Greenock or Belfast with timber at 112/6 or Holland at 113/9, April.

New Orleans.

[From our own Correspondent.]

New Orleans, La., March 19.

At this period of the season the future of all industries is somewhat difficult to forecast, and the conditions surrounding the general market are more or less of such a nature as to preclude the possibility of forming any decided opinion of the outlook for the spring and summer trade. With regard to the lumber trade in this section, however, there are many features which indicate a fairly active movement during the coming season, and under all present conditions one can safely predict a continuance of the activity which characterized the market last year. The domestic demand for lumber so far this year has, of course, been lighter than last; mills have been closing up old contracts, and many of them are accumulating stock for a prospective demand. At all saw-mill sections along the lines of railroad entering this city mills have generally been busy, and have handled considerable business during January and February. The report of the yellow-pine clearing-house for the year 1899, covering the operation of 138 of the most representative yellow-pine plants in the South, has been made public. The total cut of these mills was 1,616,562,074 feet, while their shipments aggregated 1,639,877,719 feet, an excess of shipment over production of 83,315,645 feet. The average cut of each mill during the year was 11,714,217 feet, while the average shipments of each amounted to 12,317,954 feet, the average excess of shipments over production amounting to 603,737 feet for each mill. Of these shipments, the strictly yellow-pine producing States used 614,931,006 feet, or 36.17 per cent. of the whole amount consumed. The report also gives the total of stocks on hand January 1, amounting to 391,444,598 feet, or an average of 2,836,555 feet to each mill. This stock is distributed as follows: Missouri, 62,924,633 feet; Arkansas and Indian Territory, 148,892,236; Texas, 76,429,141; Louisiana, 62,100,880; Mississippi, 32,230,803; Alabama and Georgia, 19,257,905; total, 391,444,598 feet. The cypress trade in this State is beginning to show phenomenal proportions. The popularity of this wood of commerce has been firmly established, and the outlook for business can be safely predicted. All the cypress mills of Louisiana have been in receipt of orders steadily since the opening of the present year. New markets are being opened up constantly, and the demand now comes from all sections of the country. As a result of the prosperity in the lumber trade there is a pronounced advance in timber lands. The demand continues uninterrupted, and is applicable to all kinds of timber, while prices within the past two years have more than doubled. The hardwood trade in this section is now becoming of great importance, and during the past two months the export business in hardwoods has been of considerable volume. The local building demand for lumber and building material is fair, and considerable material is going into consumption for buildings and other city improvements. The real-estate market shows a material improvement, and it is stated that a season of activity is expected. The demand at the moment is mostly for improved properties, which will yield a good reve-

nue. The progress of drainage work and paving and the prospect of sewerage are great factors in improving the market for real estate. Receipts of lumber during the past week were 2,059,000 feet, and for the season 60,026,078 feet, against 53,001,700 feet last season.

Lumber in Florida.

[Special Cor. Manufacturers' Record.]

Ocala, Fla., March 19.

C. C. Todd of this city has just closed a deal, whereby he sold 11,000 acres of State land, recently granted to the Florida Orange, Canal & Transit Co., to Capt. W. N. Camp of the Camp Phosphate Co. of Albion. The land is in Lee and De Soto counties, and is heavily timbered with cypress and easily accessible.

The Gulf Lumber Co. has now in operation two large lumber mills, one at Citronelle and one at Gulf Junction, and has orders enough on hand to keep the entire plant running for a year. The company will erect shortly another and much larger mill at Hunter's Spring, at the head of navigation of Crystal river. It will own and operate steamboats, tugs, lighters and sailing vessels, build tramways, railways, etc., for the transportation of logs, timber and naval stores. The increased exports from Crystal River, resulting from the operations of this company, will, it is hoped, induce the government to begin the work of deepening the channel of the river and bar.

Lumber Notes.

Shipments of lumber from the port of Mobile for the week ending the 16th inst. aggregated 4,044,683 superficial feet, and for the season 80,712,319 feet.

The Circle Lumber Co. of Oronogo, Mo., was chartered last week with a capital of \$6000. The incorporators are Charles Wilson, H. W. Curry and J. C. Hedgecock.

Receipts of lumber at the port of New Orleans for the week ending the 16th inst. amounted to 2,059,000 feet, and for the season 60,026,274 feet, against 53,001,700 feet last season.

Mr. Walter W. Mills of Carthage, N. C., has been awarded the contract for the lumber to be used in building the new cotton factory at Durham, N. C. He is to furnish 1,500,000 feet.

The plant of the Meridian Planing Mills at Meridian, Miss., was completely destroyed by fire last week. The loss on building and machinery is estimated at \$13,000, with \$6000 insurance.

The Dimension Lumber Co. of St. Louis, Mo., was chartered last week with a capital stock of \$5000, all paid in. The stockholders are B. F. Craig, William Gruendler and G. J. Gruendler.

David Werling of Adams county, Ind., has purchased about 1000 acres of valuable timber land near Tusculum, Ala. He will erect saw-mills on the property and engage extensively in the lumber business.

The Mammoth Pine Lumber Co. of Neal Springs, Sevier county, Arkansas, was chartered last week with a capital of \$200,000. The officers of the company are D. C. Richardson, president; J. M. Richardson, treasurer, and Gerald Fitzgerald, secretary.

The labor differences which have restricted timber operations in Pensacola, Fla., for some weeks past were amicably adjusted on the 16th inst. The laborers have returned to work, and timber is now being received for export from Ferry Pass as required.

Mr. Baker, a Northern capitalist, has just begun the erection of a \$20,000 lumber and planing mill and dry-kiln at Folk-

stone, N. C., on the New Berne branch of the Atlantic Coast Line. The plant is located in the best timber section of the North Carolina pine belt.

The Loxley Lumber Co. of Mobile, Ala., was incorporated last week, with a capital stock of \$100,000. The company will operate saw-mills, woodworking plants and deal largely in lumber and timber, etc. The directors are John E. Loxley, Harry T. Smith and G. G. Griffith.

The Drew Lumber Co. of Branford, Fla., contemplates erecting a large saw-mill at Peacock Shoals in Lafayette county, Florida. The company now has a large force of hands grading a railroad through Lafayette county, which, when completed, will open up a rich timber belt for turpentine and saw-mill purposes.

A train of eighteen cars loaded with box material was shipped from Memphis, Tenn., on the 14th inst. over the Illinois Central Railroad for Muncie, Ind. This is said to be the inauguration of an immense trade with Northern and Eastern sections in cottonwood box material.

It is stated that the Southwest Arkansas & Indian Territory Railroad and the Smithton Lumber Co.'s plant were sold at Smithton, Ark., on the 13th inst. to Murray Carleton, a St. Louis capitalist, for \$160,000. It is understood that the road will be extended from Pike City.

The work on the new coal pier being built by the Barrett & Record Co. of Minneapolis, Minn., for the Baltimore & Ohio Railroad at Curtis Bay near Baltimore will be completed about June 1 next. In the construction of this extensive work 5,000,000 feet of lumber will be used, while 4000 piles will be driven.

It is stated that the Georgia Lumber Co. of Savannah, Ga., has practically closed a contract with the Morse Dry-Dock Co. of New York for 3,000,000 feet of yellow-pine lumber, to be used in the construction of the largest dry-dock in the country. The lumber is to be furnished in ninety days, and will be shipped from Savannah by water to New York.

After April 1 the Kansas Salt Co. of Beaumont, Texas, will discontinue the operation of its stove factory in that city. The factory has been located at the saw-mill plant of the Texas Tram & Lumber Co.'s plant, and this company will, it is said, install new machinery for a larger and more modern stove factory to occupy the place of the one to be removed.

Receipts of logs at Chattanooga last week amounted to over 2,500,000 feet. It is stated that since January 1 over 15,000,000 feet have been received at that city from the Upper Tennessee and other rivers. About 10,000,000 feet more will come out before the season is over. The lumber trade at Chattanooga and adjacent points was never in better condition.

The Arkansas & Mississippi Shingle Association was organized last week in Memphis, Tenn. One of the objects of the association is to maintain prices at a fair margin of profit. The officers of the association are H. L. Townley of Nettleton, Ark., president; H. McCreery of Blackrock, Ark., vice-president; C. H. Moore of Memphis, treasurer, and R. W. Robinson of Memphis, secretary.

It is stated that a deal has just been consummated at Quitman, Miss., in which the Wetherbee Lumber Co. has sold its large saw-mill plant located at that place to Northern capitalists. The company has been incorporated as the Mississippi Lumber Co., with a capital of over \$1,000,000, and is now engaged in enlarging the plant. When completed it will have a capacity of 150,000 feet of lumber per day.

PHOSPHATES.

FLORIDA PHOSPHATE.

Resumption of Work in Mines Temporarily Inactive.

[Special Cor. Manufacturers' Record.]
Ocala, Fla., March 19.

The closing down of the ten phosphate mines in this section two weeks ago, and the consequent throwing out of employment of a thousand laborers, has been felt by the merchants in all lines of trade, but we are glad to state that the mines will all be running again in a few days. Hood & Hubbard have made new contracts for their rock, paid off their men Saturday night and resumed mining today. They have two mines at Dunnellon and two at Archer. This firm has mined steadily for the past six months, filling contracts made on a low scale of prices and at a loss. They were not in debt deeply, two weeks' pay for their men being the bulk of their liabilities. J. V. Burke, who operates two mines, one at Early Bird and one at Cordeal, was forced to shut down at the same time and for the same cause. These two firms, having made new contracts for the sale of their rock, resumed mining today.

H. G. Hassard will also start up his mines again; he has five at and near Juliette, where he has deposits enough to make his fortune; one mine will be opened tomorrow or Wednesday, and the others within the next ten days. Mr. Hassard, when he closed down, owed in round numbers \$30,000, but has satisfied his creditors, who, with one or two exceptions, did not resort to the courts. He has taken as a partner Capt. A. D. Wright, who is already mining at Dutton. Captain Wright has ample ready cash, which, when united with Mr. Hassard's splendid plants and deposits, will assure success for the new firm. The miners are learning a lesson on contracts, and many of them will refuse to contract for their rock so far ahead, and will stick to short-time contracts or sell in the open market.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., March 21.

With the improvement in other fertilizer ingredients the phosphate market is surrounded with features indicating a satisfactory outlook for the spring and summer trade. At all points throughout the Southern phosphate belt miners are fully engaged, taxing their various plants to their utmost capacity. Shipments continue to show considerable volume, but as rates continue high the offering of phosphate tonnage is light. During the past week the following charters were reported: British steamer Manar, 1650 tons, from Fernandina to Rotterdam at 19/4, March-April; schooner Frances M., 1096 tons, from Port Tampa to Philadelphia at \$2.75, and British steamer Glenhaffen from Fernandina to Rotterdam at 19/4, April. The mining situation in South Carolina is reported satisfactory, and there is a fair demand for all the output. Prices are steady, with crude rock \$4 at the mines and hot-air-dried \$4.50 f. o. b. vessel in Ashley river. In Florida holders of rock are very firm in their views, and the slight decline in Europe has not affected anyone seriously. Several Marion

county miners who had sold large lots of rock for future delivery have been somewhat handicapped by the failure of foreign buyers to comply with their contracts. These miners, however, are now at work again pushing the work of mining vigorously and employing all their original force of hands. The outlook in Tennessee is said to be flattering; laborers are returning to the mines, and with favorable weather the various companies at Mt. Pleasant and other phosphate sections will get out considerable rock. Shipments continue heavy for both home and foreign consumption. Prices continue steady and unchanged; 70, 72 and 73 per cent. rock is quoted \$2.25 to \$2.50, 75 per cent. \$2.75 to \$3 and 78 per cent. \$3.50 to \$4, all f. o. b. Mt. Pleasant.

Fertilizer Ingredients.

The business last week in ammoniates was fairly active. Stocks in the West are well cleaned up, and what little is offering is held at extreme figures. The demand from both the East and South is fair, and from the latter source there has been considerable business developed during the week. The market for sulphate of ammonia is firm at outside figures. Nitrate of soda is strong for near positions, and offerings light.

The following table represents the prices current at this date:

Sulphate of ammonia (gas).....	\$3 10 @ 3 12 1/2
Nitrate of soda.....	2 25 @ 2 30
Blood.....	2 60 @ —
Hoof Meal.....	2 30 @ —
Azotine (beef).....	2 40 @ 2 50
Azotine (pork).....	2 40 @ 2 50
Tankage (concentrated).....	2 25 @ 2 30
Tankage (9 and 20).....	2 35 & 10 @ 2 40 & 10
Tankage (7 and 30).....	19 00 @ 20 00
Fish (dry).....	20 00 @ —
Fish (acid).....	12 00 @ —

Phosphate and Fertilizer Notes.

The phosphate mines of Swift & Co. at Spring Hill, Tenn., are now running on full time. Three carloads a day are being shipped to Atlanta, Ga., where the company has a fertilizer plant.

Operations were resumed on the 19th inst. at the phosphate plants near Juliette of Hood & Hubbard and J. Y. Burke, giving employment to about 400 men. H. G. Hassard expects to start up a mine or two this week.

The schooner Adele Thackera cleared from Charleston, S. C., last week for New York with 950 tons of phosphate rock. The total clearances of phosphate rock for domestic ports from Charleston since September 1, 1899, aggregate 33,915 tons.

It is stated that a stock company to be known as the Standard Kaolin Co. is being organized at Aiken, S. C., to open a clay bed on Town creek near that city. The bed is on a line with the kaolin beds at Langley, and is estimated to be from fifteen to twenty feet thick and of excellent quality. The company is to have a capital of \$15,000. Messrs. J. H. McMillan and J. R. Morris are the incorporators.

It is reported that negotiations, which have been in progress for some time between the Pennsylvania-Tennessee Phosphate Co. and parties near Franklin, Tenn., for phosphate properties, have been declared off. On the retirement of the above company parties from East Tennessee became interested and closed deals with several land-owners. The lands are to be mined on a royalty, and later on a phosphate plant will be erected. Work will begin at once.

The Southern Phosphate Mining Co., recently organized with a capital of \$50,000, has now one of the most complete and fully-equipped plants in the State at Early Bird in Marion county, Florida. The capacity of the company's plant is 15,000 tons per annum, and it is the intention of the company to begin the erection of another plant as soon as practicable.

The headquarters of the company are at Jacksonville, Fla., and the officers are Jonas Brereton, president; Fred W. Haward, vice-president and treasurer, and Charles S. Adams, secretary.

The Norwegian bark Lady Palmerston sailed from Port Tampa, Fla., on the 13th inst. for Melbourne, Australia, with 1838 tons of pebble phosphate from the Land Pebble Phosphate Co. The Austrian steamer Gottfield Schneckler sailed on the 15th inst. with a cargo of 1814 tons of pebble from the Palmetto Phosphate Co. for Venice, Italy. The steamship Mae sailed on the 19th inst. for Cartaret, N. J., with 2343 tons of pebble from the Palmetto Phosphate Co. The schooner W. C. Tanner arrived on the 18th from Tampico to load a cargo of phosphate rock.

Revival of the Cut Nail.

It is interesting to note the growing demand for the iron cut nail. This demand has grown so strong that there is some difficulty in supplying it, and there is considerable speculation as to whether or not it does not mean a return of the cut nail to favor, if not to its old-time place in the building trade. It appears that experience has proven that the wire nail is sadly lacking for certain purposes; at least, it does not supply the place of the cut nail, and the building trade is generally recognizing the fact and returning to a greater or less degree to the use of the iron cut nail. All of which is of special interest to Wheeling, once the home of the cut-nail industry. The growing demand for the cut nail should cause our manufacturers to consider the advisability of overhauling their old nail plants and putting them in working order with a view to supplying this new demand for the old iron nail, whose superiority seems to be slowly but surely getting vindication after these many years.—Wheeling Register.

A conference of the leading lumber manufacturers of Mississippi and Alabama was held in Birmingham, Ala., on the 13th inst. F. H. Lathrop of the Lathrop-Hatton Lumber Co. of Riverside, Ala., presided. The purpose of the meeting was to discuss trade conditions generally, arrange for the maintenance of prices and increase the membership of the Lumbermen's Bureau of Information, whose headquarters are in St. Louis. After considerable discussion it was decided to make no advance in prices or changes in classification. A general exchange of views developed the fact that the lumber trade is in excellent condition, with a heavy demand from all quarters. The meeting was largely attended, every leading member from Alabama and Mississippi being represented.

The Percival Manufacturing Co. of Charleston, S. C., was chartered last week for the purpose of manufacturing sash, doors, blinds and house-finishes woodwork generally. The capital stock of the company is placed at \$16,000. The officers of the company are John D. Cappleman, president; E. W. Percival, vice-president; O. C. Beckman, secretary and treasurer. Mr. Percival will be in charge of the manufacturing department, and being an accomplished millman, is well adapted for a manager.

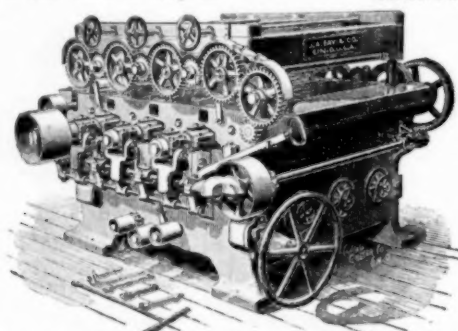
The Bay St. Louis (Miss.) and Wave-land Industrial and Commercial College has elected August Keller, president; Peter Hellwege, Sr., E. E. O'Brien, secretary, and J. O. Mauffray, treasurer.

The output in the Joplin (Mo.) district in the week ended March 17 was 112,271, 280 pounds of zinc ore and 1,043,170 pounds of lead ore, valued in all at \$199,152.

MECHANICAL.

Paint Economy.

A writer on the subject of paints and painting has summed up the question of economy in the following sentence: "If a house-owner found at the end of, say, fifteen years that it cost more to keep his



No. 4 TRIPLE-DRUM SANDPAPERING MACHINE.

house protected with one kind of paint than it would with another kind, he would choose the other kind." If he be a prudent house-owner he will certainly do so.

The least important consideration with regard to paint is its first cost. When we remember the fact that this inexpensive material protects, or should protect, expensive buildings and preserve them from decay, and when we realize, further, that the cost of the material is trifling in comparison with the expense of applying it, we shall see that it is false economy to scrutinize the cost per pound or gallon. The question which it would profit the user to determine is the degree of protection afforded to his buildings by the paint, and the frequency with which it will require renewal.

If one paint costs ten cents per pound and another five, the higher-price goods would obviously be the more economical if they wore twice as long as the cheaper paint, since the cost of the labor for renewing is far greater than the cost of the material. In selecting a paint, therefore, the question of cost may be left entirely out of consideration.

It is a curious fact, however, that more costly paints are not the most durable. Good combination paints based on zinc white can be had anywhere at a lower price per pound than pure lead, while they will cover more surface and long outlast the pure lead. Pure lead will, under the most favorable circumstances, wear about five years. This means that it will remain on the surface to which it is applied for about that length of time; but its protecting value does not continue for anything like so long, since the oil in the paint loses its water-repelling quality, and the surface becomes absorbent in a much shorter time—this, under the most favorable conditions of a fairly dry climate, away from the gas and smoke of towns and factories. Where the gases of combustion have access to it lead paint deteriorates much more rapidly.

The combination paints containing zinc white, on the other hand, do not become absorbent, and in proportion to the quantity of zinc contained are unsusceptible to the action of the gases of combustion.

With pure white lead used under these conditions, durability becomes a question of months rather than years, and pure lead is therefore about as expensive a pigment as could be selected for the service. The poorest, cheapest emulsion paint on the market would probably give better service.

But these cheap combinations in which oil is replaced by benzine and water are economical only by comparison with less durable compounds. Combination paints based on zinc white and containing pure

linseed oil without emulsifying agents are to be had in almost endless profusion, and all of them will give good and economical service.

The whole matter may be summed up in a sentence: Paints intended for use on factories, to give economical service, must contain zinc white.

STANTON DUDLEY.

Sandpapering Machine.

We present an illustration of a new machine recently introduced by J. A. Fay & Co., of 270 to 290 West Front street, Cincinnati, Ohio. It is the new "No. 4 Triple-Drum Sandpapering Machine." This machine is invaluable where a perfectly smooth surface is required, either for varnishing or painting. It is very massive and substantial, and combines in its construction all the latest improvements which an extensive experience could suggest.

The three steel polishing cylinders, upon which the sandpaper is placed, have a vibratory motion to prevent the formation of lines, and are equipped with a device for quickly applying the sandpaper and giving it the proper tension. The feed is very powerful, being driven by a train of heavy expansion gearing, and will receive material eight inches thick.

The pressure rolls are so arranged that adjustments can be made very readily, and the feed can be stopped or started instantly.

Geared Electric Mine Pump.

In many installations a source of power for operating a pump cannot, for obvious

the style illustrated herewith for a maximum pressure of 300 pounds per square inch.

The company states that by the substitution of electric propulsion of pumps in place of direct-acting steam pumps a great economy is effected, the consumption of coal per horse-power per hour being reduced to one-third that required for operation of the ordinary duplex direct-acting steam pump. It is an admitted fact that the ordinary direct-acting steam pump, which admits steam at the initial pressure throughout the length of the

or a controller arrangement will be furnished by which all pumps can be controlled from one central point. Mine pumps will be furnished in both internal and external packed patterns. Special quotations on pumps with solid bronze water ends will be furnished on request. All pumps are bronze-fitted, with removable linings.

Besly Band Grinder.

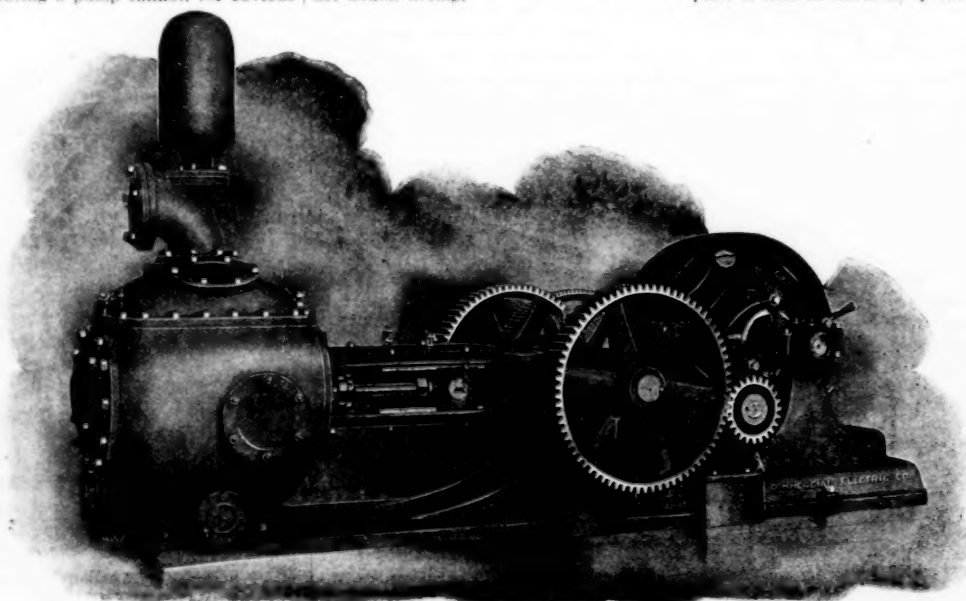
We illustrate the "Besly Band Grinding Machine." The complete machine consists of pedestal, as shown, countershaft



BESLY BAND GRINDING MACHINE.

stroke of the pump, will consume about 120 pounds steam per horse-power per hour. By the substitution of an electric pump this consumption of steam can be reduced to fifty pounds per horse-power per hour after allowing an average loss in transmission. All gearing is accurately cut from the solid, and the pinions on the motors are of rawhide, and all its pumps are double-acting.

and spindles to hold either one or two emery band polishing wheels. These wheels are made of cast iron. An elastic surface is produced by a felt covering. The emery or other abrasive material is a piece of emery cloth which is tightened firmly around the wheel. To reset the wheel or change the grade of emery it is necessary only to remove a band and replace it with another, an operation requiring only a minute of time. One of these wheels will take the place and do the work of a large number of polishing wheels. The wheels, when used with the Besly emery bands, are always perfectly balanced and ready for use. This machine is suitable for shops where skilled polishers are not employed. An ordinary shop boy with a little practice



GEARED ELECTRIC MINE PUMP.

reasons, be located in close proximity to the water supply. To answer the demand for a pump which can be controlled and operated at a distance, the Commercial Electric Co., of Indianapolis has equipped to furnish a full line of house-service, elevator and mine pumps. These pumps can be furnished in any capacities up to and including 2000 gallons per minute, and in

The Commercial Company's mine pumps are arranged, when advisable, for special protection against damage by water or falling slate. The machines are also specially insulated, so that the liability to "grounds" is removed.

A system of control is furnished for these pumps, so that the height of water can be maintained constant in the pump,

ing only a minute of time. One of these wheels will take the place and do the work of a large number of polishing wheels. The wheels, when used with the Besly emery bands, are always perfectly balanced and ready for use. This machine is suitable for shops where skilled polishers are not employed. An ordinary shop boy with a little practice

can do the work of a skilled polisher.

The diameter of the wheels is twelve inches, and the width of face two and one-half inches. These are made in various combinations, No. 20 C consisting of a single band wheel mounted on a pedestal. Its weight is 600 pounds.

No. 20 D machine consists of pedestal and countershaft, with spindle, as shown in illustration. On this machine a band wheel may be used at one end of spindle and a regular buff or an emery wheel at opposite end; this machine weighs complete 625 pounds.

No. 20 D machine is the same as shown, except with band wheels at each end of spindle; it weighs 650 pounds.

A dozen assorted emery-cloth bands go with each machine.

For further details address the builders, Messrs. Chas. H. Besly & Co., 10 North Canal street, Chicago.

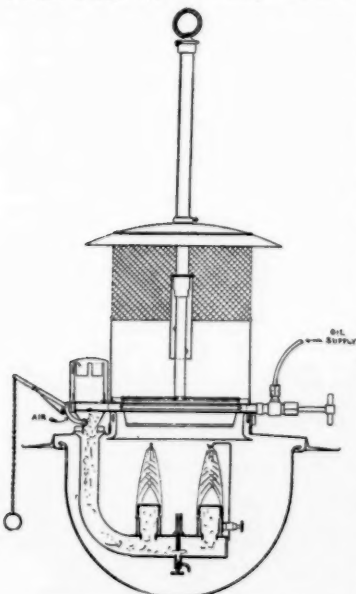
A Successful Lighting System.

The lighting of public buildings and private structures by other than gas or electricity has been a subject that during recent years received the attention of inventors.

The use of oil for lighting purposes is world-wide, and, where the accompanying equipment is of the most modern type, oil has been found to furnish a brilliant and diffusive light for all purposes.

One of the most successful systems of oil lighting is that known as the "Kitson," so named after its inventor, Mr. Arthur Kitson, who formed the Kitson Hydro-Carbon Heating & Incandescent Lighting Co. to introduce it, and established branch companies in different cities throughout the country.

The adaptability of the "Kitson" light was early recognized in the South, and whereas a year ago but few cities in that section had introduced it, today thousands of progressive business men have recognized its value. Not only in the South, but in many cities throughout the United States and in foreign countries



SECTION OF KITSON LAMP.

this system is rapidly acquiring a large clientele.

Prominent among the advantages claimed for the "Kitson" light are that it is more brilliant, more diffusive and more like daylight than any other artificial light, and that it is produced at a less rate per candle-power than gas or electricity. These features have caused the installation of plants in stores, halls, factories, parks, railroad cars and steamboats.

The incandescent mantle known as the "Welsbach," and the application of com-

mon kerosene oil to it, combine to produce the successful light in question.

Briefly the system is this: Oil is supplied from a central reservoir under pressure of from thirty to sixty pounds per square inch, through fine tubes (varying from one-quarter to one-sixteenth inch diameter), to the lamps, which may be distributed in various places. The pressure to the oil is furnished in one of two ways: First, by means of a water pump operated by water pressure, in which the oil is drawn from a tank and distributed under pressure through the mains; sec-



OIL-SUPPLY TANK, WITH ATTACHED AIR PUMP.

ond, by air which is pumped upon the surface of the oil in the tank.

The lamp consists of a vapor tube, having an oil inlet at one end and a needlehole at the other, an air-mixing tube with burner and mantle, a chimney, a reflector and globe, and is so constructed that the oil flows from a reservoir into the vaporizing tube, where it is gasified by heat from the mantles. In escaping through a fine needle hole at the end of the vapor tube, it draws air, on the principle of the injector, into the air-mixing tube, and the air and vapor together mix freely and pass to the burners, where a flame of great heating power is burned in the mantles. The brilliancy of the light and the high candle-power are due to the high flame temperature of the vapor. The construction and general appearance of the lamp are shown in the two illustrations we present herewith. This action of vaporizing the oil is in reality a miniature gas works. The vapor tube is nothing more than a small oil-gas retort; it is made of drawn steel, and is kept at a very high temperature by being placed in the hottest zones of combustion of the mantles. Mr. Kitson experimented with many positions of this vapor tube until the present form was decided upon as final, it being found to give the best possible results. The present form is a horizontal tube, supported immediately above the mantles, and it is its higher temperature that has made it most successful. The difficulty of formation of carbon has been obviated by the use of an inner tube, constructed in a peculiar way, so that it is supported in the center of the vapor tube. The carbon that would form on the walls of the vapor tube, and which would otherwise clog the vapor hole, now accumulates upon this inner tube, owing to the difference of temperature between the two tubes. Periodically the vapor tube is withdrawn from the lamp, the inner tube is taken out, cleaned and replaced. In this way the tubes are used over and over again. The temperature

of the vapor tube is so high that a permanent gas is actually generated, and it is possible to take the gas from the vapor tube and burn it a considerable distance from the lamp, showing that the oil is not merely vaporized, but actually converted into a fixed gas. This will give some idea of the temperature of the mantle.

Another difficulty experienced was in keeping the small vapor-tube hole through which the gas escapes to the mixing tube free from obstructions. This hole is no larger than the point of a cambric needle, so that the smallest particle of dust would clog it. At first a permanent needle was inserted and operated within the vapor tube. The tendency, however, of this was to enlarge the hole. The present device is an adjustable needle which works from the outside, and is shown in the accompanying section of the lamp.

In making an installation of Kitson lamps, the tank is usually placed either in the cellar or in some out-of-the-way place on the ground floor of the building, and tubes are run from it to the lamps. The tubing is encased in molding, in order to make a more workmanlike appearance, and also to avoid any accident happening, which might dent the tubing. A valve for each lamp is placed on the wall, about six feet above the floor level, for turning the oil on and off, thus obviating the necessity of using a stepladder, as would be the case if such a valve were not provided. However, to make the system doubly safe, a valve is also placed at the oil inlet of the vaporizing tube, and this may be used with the same effect as by the use of the wall valve. Whenever an installation is made to light several floors of a building, cut-off valves are also placed on each floor.

It has been found that a store 30x50 or 60 feet may be brilliantly illuminated by the use of one two-mantle lamp, of course depending somewhat on the conditions prevailing in each specific case, the color of the walls and ceiling, the height of the latter, all entering into the problem.

Safety devices that entirely satisfy the insurance companies are, of course, a part of this system of lighting.

Further details can be obtained by addressing the Kitson Hydro-Carbon Lighting Co. at its office, Eighth and Willow streets, Philadelphia, Pa.

Coaling Vessels at Sea.

A conveying apparatus for coaling vessels at sea is manufactured by the Lidger-



U. S. S. MASSACHUSETTS COALING AT SEA.

wood Manufacturing Co. of New York, and it has been adopted recently by the Navy Department. In the operation of this apparatus the warship to be coaled takes the collier in tow, leaving a distance of from 300 to 400 feet between the ships, depending upon the roughness of the sea.

On the collier is an engine with two drums or reels. A small wire rope three-quarters of an inch in diameter is led from one drum or reel to a sheave at the top of the foremast, and thence across to

a sheave mounted above the quarter deck of the warship, returning by a parallel route to the other drum or reel. A load carriage of novel design is gripped to the upper branch of this elevated rope, and it is forced to travel by the reciprocating motion of the rope to and from the warship. It carries suspended two bags of coal weighing 840 pounds, and drops them into a canvass chute over the quarter deck of the warship at the rate of one load per minute, or from twenty to twenty-five tons per hour.

The rope is operated by one drum or reel winding in one end of the rope, while the other drum or reel is designed to draw in its part of the rope in the same direction as the other, and is provided so that it slips by an ingenious arrangement of frictions. Thus one drum gives motion to the rope and the other keeps the requisite tension in the rope while it is paying out, so that the load in transit may be sustained with sufficient clearance over the water intervening.

This mode of operation is wholly new, and would have no use if the loads were being transported between fixed supports. This method was employed by the designer, Mr. Spencer Miller, to overcome, or rather to be independent of the relative motion of the two ships effected by the roughness of the sea. It will be observed that if the boats lurch apart one rope simply slips to accommodate it, and on the other hand, if the boats come together, either one drum or the other winds it in at a speed faster than the ships can approach one another.

The invention employs, besides this rope, an auxiliary rope known as the sea anchor line, which is solely employed to prevent the carriage from twisting when returning unloaded from the warship.

This sea anchor line is secured by a lashing or knock-off hook to the warship, and passes over a pulley on top of the carriage; from thence it is led through pulleys on the two masts and then astern several hundred feet into the sea, while on its end is secured a canvass cone, dragging with its mouth towards the warship, and known as the sea anchor. The engraving shows the collier *Marcellus* coaling the battleship *Massachusetts* twenty miles off Sandy Hook by means of the Lidgerwood Manufacturing Co.'s device, during the five sea trials recently made by the United States Navy Department.

The supports for the apparatus, viz., the foremast of the collier and the shear poles of the *Massachusetts*, are held by steel guy ropes infinitely stronger than the

small wire ropes which carry the loads across. The apparatus may also be employed for the transfer of ammunition and supplies.

Messrs. S. S. Mauney, D. W. Aderholt and M. E. Rudasill of Cherryville, N. C., have incorporated the Vivian Cotton Mills, with capital stock of \$20,000. The company has privilege to increase to \$2,000,000. Its purpose is to build a cotton factory.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Birmingham—Iron Furnace.—The Tennessee Coal, Iron & Railroad Co. has put in blast the second furnace at Oxmoor, near Birmingham; furnace has been improved with five new boilers of 300 horse-power each and other machinery; also been generally overhauled and improved; capacity seventy-five tons daily.

Birmingham—Steel-plate Works, etc.—The annual report of the Tennessee Coal, Iron & Railroad Co., James Bowron, vice-president, says negotiations are being conducted for establishing at Ensley City cotton-tie, hoop, tinplate, steel-tube, sheet and plate works; these enterprises would mean an expenditure of about \$10,000,000.

Edwardsville—Graphite Works.—The Standard Graphite Co. will build extensive works near Edwardsville.

Greensboro—Ginnery, etc.—Blunt & Word have purchased the ginnery and steam-mill outfit of H. H. Evans & Co., and will operate it.*

Gurley—Handle Factory.—The Enterprise Spoke Co. has reorganized, and will double its factory's capacity.

Langdon—Iron Mining.—The Cherokee Mining Co. contemplates adding a washer plant with all necessary appliances, such as screens, conveyors, separators, tram cars, crushers, etc., for the purpose of doubling the capacity of its iron mines.*

Mobile—Lumber Mills.—The Loxley Lumber Co. has incorporated for the purpose of manufacturing timber and lumber, operating saw-mills, woodworking plants, etc.; the capital stock is \$100,000. The directors are John E. Loxley, Fred C. Loxley, Harry T. Smith and G. G. Griffith.

Montevallo—Cotton and Knitting Mill.—H. C. Reynolds, Burgess Little, J. E. Burkstresser and W. B. Reynolds will incorporate a company to establish cotton and knitting mill.

New Decatur—Bridge Works.—The \$1,000,000 bridge works noted during the week as to be established by the Groton (N. Y.) Bridge & Manufacturing Co. will be incorporated as a separate institution. Articles of incorporation have been filed as the Alabama Bridge Co., the capital stock fully paid in being \$500,000. The works will employ 700

men. Frank Conger, president Groton Bridge & Manufacturing Co., at Groton, N. Y., can be addressed for information. Company wants entire plant of machinery for the works.*

New Decatur—Iron Furnace.—Eugene Zimmerman (of Cincinnati, Ohio), president of the Georgia & Alabama Coal & Iron Co. (offices in Decatur), has purchased the furnace and site of the Decatur Land Co. The furnace will be overhauled and improved and put in operation.

Oxanna—Planing Mill.—The Oxanna Lumber & Coal Co. has been organized by E. M. Lewis and J. H. Hill, and has completed and equipped large planing mill and dry-kilns; company also has saw-mill at Leatherwood.

Poplar Ridge—Flour Mill.—The Butler Mill Co. contemplates putting in new turbine wheel and other machinery.

Tusculum—Saw-mills.—David Werling of Adams county, Indiana, has leased 970 acres of timber lands near Tusculum, and will erect saw-mills thereon to cut lumber.

ARKANSAS.

Fort Smith—Cotton Mill.—Geo. L. Sparks, William Blair, J. B. Williams, J. W. Patrick and others will organize a \$100,000 stock company to build a cotton mill.

Fort Smith—Cotton Mill.—A company will be chartered for the immediate erection of a cotton mill, capitalization to be \$100,000. Geo. T. Sparks, J. B. Williams, William Blair and others are interested.

Mountain Home—Mining.—The Hawley Mining Co. has been incorporated, with E. Pleas, president; W. L. Marshall, vice-president; P. E. Bratton, secretary and treasurer; capital stock \$500,000.

Neal Springs—Timber.—Incorporated: The Mammoth Pine Co., capital stock \$200,000; D. C. Richardson, president; T. M. Richardson, treasurer; Gerald Fitzgerald, secretary.

FLORIDA.

Abbott—Saw-mill, etc.—Greer Bros. of Ada, Ga., have purchased timber lands near Abbott and will erect mill to cut same; mill to have daily capacity of 40,000 feet of lumber.

Branford—Saw-mill.—The Drew Lumber Co. contemplates erecting a large saw-mill at Peacock shoals.

Callahan—Rice Mill.—Dr. Newcombe has erected a rice mill of 100 bushels capacity daily.

Early Bird—Phosphate Mines.—The Southern Phosphate Mining Co. (reported recently under Jacksonville as incorporating) has extensive mines on 4500 acres of land in Marion county, and at Early Bird has erected a plant of 15,000 tons annual capacity. Another plant will be erected as soon as practicable. Company has paid-up capital of \$50,000, and its officers are Isaac Brereton, president; Fred. W. Haward, vice-president, and Chas. S. Adams, secretary; office in Room 520 Gardner Building, Jacksonville.

Lake City—Cotton Ginnery.—The Brick Ginnery Co. contemplates erecting a ginnery for handling Sea Island cotton.*

Newberry—Phosphate Plant.—The Cummer Land Co. has lumber and machinery on hand for a new phosphate plant, which will be built at once.

Tampa—Planing Mill.—E. C. Lassiter and J. T. Moffitt of Asheboro, N. C., have purchased 15,000 acres of timber lands near Tampa, where they will build a planing mill to get out the timber.

GEORGIA.

Athens—Ice Factory.—The People's Ice Works, D. J. Boynton, proprietor, reported burned, will be rebuilt.

Athens—Water-power-Electrical.—Messrs. A. H. Hodgson, E. R. Hodgson, J. M. Hodgson, J. Y. Carithers and W. T. Bryan will establish an electric-power plant at Tallassee shoals, eight miles from Athens, on the Oconee river. One hundred thousand dollars will be expended and 1000 horse-power will be developed. It is reported also that a woolen mill will be erected.

Atlanta—Cotton-mill Machinery Works.—It is proposed to organize the Southern Textile Machinery Co., with capital stock of \$500,000, to establish works for the production of cotton-mill machinery; the Atlanta Business Men's League is assisting to promote the enterprise, and H. G. McKerron

(an importer of English textile machinery) of Boston, Mass., is taking an active part. Atlanta parties subscribing to the capital are H. T. Inman, J. W. English, Hoke Smith and others.

Atlanta—Furniture Factory.—Charles R. Howard of 71 Piedmont avenue contemplates establishing a factory for tables and chairs.

Atlanta—Gold Mines.—The Nacoochee Mining & Manufacturing Co., capitalization \$5,000,000, has applied for a charter, its purpose being to develop veins of gold ore in White county; incorporators, Allen Candler, ex-Governor W. J. Northen, F. B. Neal, F. E. Black, C. S. Kingsberry, E. S. Munford, J. W. Goldsmith and H. H. Cabaniss, all of Atlanta, and John Martin of Nacoochee, Ga. Address last named.

Cartersville—Barrel Factory.—N. M. Adams has established a barrel factory.

Cartersville—Brick Works.—The W. R. Satterfield Brick Co. has been organized, with W. R. Satterfield, president, and will establish works. Site has been chosen for plant and order given for machinery of a daily capacity for 50,000 bricks at a cost of \$20,000; will put in dryhouse and kilns this fall.*

Cochran—Handle Factory.—W. L. Poole has added an axe-handle factory to his planing mill.

Cochran—Cotton Mill.—A company has been organized, with capital stock of \$50,000, for the establishment of a cotton mill; \$30,000 has been subscribed. Address Peter L. Pencock.

Dahlonega—Gold Mining.—It is rumored that the stockholders of the Dahlonega Consolidated Gold Mining Co. will organize another mining company, to have capital stock of \$5,000,000, for the development of 5000 acres of gold-bearing lands in the Dahlonega fields. H. D. Ingersoll is manager of company mentioned.

Dahlonega—Gold Mines.—The Chicago-New South Gold Mining Co. has been incorporated, with capital stock of \$500,000, to develop mines, and has already erected a 10-stamp mill and is ready for operations; incorporators, Geo. J. Heberer, Frank Cummings, R. S. Disney, William Wallen, S. P. Berns, Fred W. Hill, Albert F. Keeney, C. F. Pearce and Samuel Olen of Chicago, Ill.; Thos. R. Cravens, J. W. Woodward, John Huff and W. S. Huff of Dahlonega.

Dublin—Furniture Factory.—The Dublin Furniture Manufacturing Co. states that it is true it will greatly enlarge its factory, as was reported last week. The company has increased capital stock to \$25,000, will put in additional machinery and erect a large saw-mill addition.

Eastman—Electric-light and Water Works.—The city has voted an issuance of \$15,000 in bonds for the construction of water-works and electric-light plant. Address "The Mayor."

Echeconnee—Cotton Mill.—Endeavors are being made to organize a cotton-factory company; \$25,000 has been subscribed.

Farmington—Flour Mill.—E. S. Dobbins and others have formed a company to build a flour mill.*

Fitzgerald—Grocery Company.—The Chambliss Grocery Co. has been incorporated, with capital stock of \$20,000, by E. F. Chambliss, F. S. Bauder and others.

Gainesville—Cotton Mill.—The Pacolet Manufacturing Co. of Pacolet, S. C., will build a \$1,000,000 cotton mill near Gainesville. Site of 850 acres has been bought for erection of a cotton factory of 50,000 spindles and complement for manufacturing 125,000 yards of sheeting daily. Lockwood, Greene & Co. of Boston will prepare the plans at once. V. M. Montgomery of Spartanburg, S. C., will manage the mill. The company's South Carolina plant runs 57,000 spindles and 2202 looms.

Gainesville—Smelting Plant.—James M. Smith of Colorado is reported as to build a \$60,000 gold-smelting plant in Gainesville.

Griffin—Knitting Mill.—The knitting-mill company recently reported as organized has taken the title of the Griffin Knitting Mills, and will build a \$20,000 plant, as has been stated previously. Douglas Boyd is president; E. H. Spivey, secretary, and E. T. Booth, superintendent.

Hartwell—Cotton Mill.—The Hartwell Cotton Mill will double its equipment, which is now 3000 spindles and 102 looms. This will make an additional investment of \$20,000.

Jackson—Corn and Flour Mill.—J. A. Plunket confirms the recent report that he is building a flour mill; flouring capacity will be augmented by corn mill of 600 bushels capacity daily; all machinery purchased.

Lavonia—Flour Mill.—Dr. E. F. Wyatt and associates have organized a company to build a \$4000 flour mill.

Macon—Cotton Mill.—The Willingham Cotton Mills is increasing its spindleage from 5180 to 8208, an increase of 3028. About \$50,000 is being expended for the additional machinery.

Macon—Carpet Factory.—T. J. C. Park and F. B. West are said to have in contemplation the erection of a carpet factory.

Macon—Publishing Company.—Incorporated: The Press Printing Co., for publishing purposes, by Thos. W. Loyless, J. B. Rau and W. F. Combs, the capital stock being \$15,000.

Rutledge—Cotton Mill.—W. P. Wallace, E. H. Watkins, W. C. Morris, J. W. Curtis and others are endeavoring to organize a cotton-mill company; \$25,000 has been subscribed.

Savannah—Rosin-oil Plant.—B. F. Finney (116 Bryan street, E.) confirms the report of last week that he has established experimental rosin-oil plant, and states that he will build a larger factory later in the year.*

Tallahassee—Broom Factory.—H. M. Leville (until now of Worcester, Mass.) will establish a broom factory.

Valdosta—Cotton Mill.—The company lately mentioned as being organized by J. N. Griffin and others for the establishment of a 5000-spindle mill has between \$50,000 and \$75,000 subscribed and will manufacture yarn and ball thread.

Washington—Sewerage System.—C. A. Robbe of Augusta has received contract for construction of sewerage system at Washington at about \$10,000.

Winder—Cotton Mill.—The Winder Banking Co. is promoting a cotton-mill enterprise and has propositions from New York and Philadelphia parties which will ensure the enterprise.

KENTUCKY.

Culhoun—Water-works.—Leslie Bosley has received franchise for and will construct system of water-works.

Kentucky—Coal Mines and Timber Lands. A company in which Robert S. Crawford of Hagerstown, Md., is interested has secured fifty square miles of timber and coal land in Kentucky and will develop it; there are four saw-mills on the property, and two more have been purchased.

Louisville—Furniture.—The Charles New Co. has been incorporated to deal in furniture by A. Levy, Hubert Levy and Charles New; capital stock \$10,000.

Mumfordsville—Flour Mill.—It is rumored that a flour mill will be built.

Owensboro—Electric-light Plant.—The city has engaged F. E. Vater of Chicago to prepare plans and specifications for its proposed electric-lighting plant. Address "The Mayor."

Owensboro—Wagon Factory.—F. A. Ames, R. S. Hughes and Alexander Hill have been mentioned in connection with a report that a wagon factory will be established.

Sturgis—Stave Factory.—The Woodruff-Kroy Co. of Davenport, Iowa, is building factory at Sturgis, as reported last week; it is to have capacity daily of 35,000 staves and 10,000 headings.

Three Springs—Flour Mill.—Denan & Co. are mentioned in connection with a rumor that a flour mill will be erected.

LOUISIANA.

Boyce—Oil Mill.—Arrangements have been completed ensuring the erection of a cotton-seed-oil mill of forty tons capacity daily; mill will cost about \$28,000. J. E. Blackburn can probably give information.

Louisiana—Rice Cultivation, etc.—It is reported that the American Rice Co. is being organized, to have capital stock of \$1,000,000, for the purpose of cultivating in rice 16,000 acres of land near Grand Lake, etc. C. F. Frothingham of New York city is said to be interested. Prof. S. A. Knapp of Lake Charles, La., is also mentioned.

New Orleans—Distillery.—The Facie Distilling Co. has completed its distillery for the production of various kinds of wines, etc.; R. E. Reyes, manager.

Shreveport—Paper-pulp Mill.—J. G. Paty

contemplates adding a paper-pulp mill or other factory to his present excelsior factory.*

MARYLAND.

Baltimore—Printing and Publishing.—Chartered: The Southern Cafe & Bar Publishing Co., to conduct printing and publishing business, by Edward E. Herold, E. M. Shilling, Edwin Crouch and others, with capital stock of \$15,000.

Baltimore—Builders' Supply Company.—The Hertel Company has been incorporated to conduct general builders' supply business by John Lange, C. A. Singewald, A. J. Hecker and others; capital \$1500.

Baltimore—Automobile Factory.—The Schaum Automobile & Motor Manufacturing Co. has been incorporated by William A. Schaum, Thomas Philbin, William H. Wickham, Walter S. Leutbecker and John J. Carroll. The capital stock is \$50,000.

Baltimore—Land Company.—The Luzerne Land Co. has been incorporated by George H. Sargeant, Charles D. Fisher, William A. Fisher, Clarence M. Ellinger and D. K. Este Fisher; capital stock is \$62,000.

Baltimore—Bolt and Iron Works.—The Lawrence Bolt and Iron Works (reported last week as incorporated) has an established plant, to which some new machinery will be added; location, rear of 422 East Pratt street.*

Baltimore—Brick and Lumber Company.—The Calverton Lumber & Brick Co. has been incorporated by Lawrence McCormick, L. J. McCormick, Charles Matt, E. Z. Gunn and others, to deal in building material; capital stock \$10,000.

Baltimore—Telephone System.—Archibald H. Taylor of Baltimore, one of the purchasers of the Home Telephone Co. of Alexandria, Va., states that the new owners propose to double capacity and extend the service to Washington and other points.

Baltimore—Telephone Company.—A bill has been introduced in the legislature to incorporate the Columbia Telephone & Telegraph Co., with capital stock of \$75,000, with power to increase to \$2,000,000; incorporators, Andrew D. Jones, David M. Newbold, Chas. A. Webb, Lloyd L. Jackson and others.

Berlin—Telephone System.—The Citizens' Telephone Co. will extend its lines to Snow Hill, sixteen miles distant.

Boring—Creamery.—Jerome Nolte will build a creamery of 1200 gallons capacity an hour.

Cumberland—Bar and Hoop Iron Manufacture.—The Potomac Steel Co., S. J. MacFarlan of Pittsburg, Pa., president, has been licensed the bar and puddle mills at the old Cumberland Rolling Mill to Pennsylvania capitalists, who will commence this spring the manufacture of bar and hoop iron; capacity at first will be twenty tons a day, which will be increased to sixty tons.

Luke—Paper Mills.—It is reported that the West Virginia Pulp & Paper Co. will erect a new building, for which plans are now being prepared. It is said that the building will be equipped for manufacturing paper.

Snow Hill—Telephone System.—The Worcester Telephone Co. will construct a line of 'phones to Stockton, nine miles distant, and thence to Pocomoke City, twelve miles distant.

MISSISSIPPI.

Belzona—Saw-mill.—R. J. McCoy has secured site and will build saw-mill.

Ellisville—Mercantile.—Incorporated: The J. P. Myers Mercantile Co., with capital stock of \$10,000, to conduct mercantile business, manufacture naval stores, etc.

Port Gibson—Planing Mill.—A planing mill with daily capacity of 10,000 feet will be established. Names of interested parties to be announced later.

Quitman—Saw-mill, etc.—Northern capitalists have purchased the saw-mill of the Wetherbee Lumber Co., and will enlarge it to have a capacity of 150,000 feet per day. The Mississippi Lumber Co. has been organized, with capital stock of \$1,000,000, to operate the mill.

MISSOURI.

Cape Girardeau—Bridge, etc.—The Southern Missouri & Illinois Railroad & Bridge Co. has been incorporated by I. M. Dittmer, Newman Erb, R. E. Rombauer, Edward Hidden and others; capital stock \$150,000.

Carthage—Mining.—Incorporated: The Missouri-Texas Mining Co., capital stock \$30,000, by Harry M. Rubey, John R. Snyder, W. D. Leeper and W. J. Leeper.

Carthage—Stone Quarry.—The Spring River Stone Co. has been incorporated for quarrying stone, etc., by G. W. Stebbins, H. C. Johns, E. W. Johns and others; capital stock \$40,000.

Carthage—Stone Quarrying.—Incorporated: The Spring River Stone Co., capital stock \$40,000, by George W. Stebbins, Henry C. Johns and Edward M. Johns.

Joplin—Gas Works.—The purchasers of the Joplin Gas Works have decided to build entirely new works; site has been purchased and Superintendent Foster has advertised for bids for the new buildings, of which there will be several, including machinery room, retort building and purifying works; plans will call for a holder of 250,000 cubic feet capacity. Among the members of the new company are J. F. Lynn of Detroit, Mich.; H. J. Lesher of Cleveland, Ohio, and W. M. Eaton of Jackson, Mich.

Kansas City—Mining.—The Tomahawk Mining Co., capital \$25,000, has been incorporated by F. A. Strickland, M. H. Lossee, Florence M. Lossee, Kansas City, Mo.; A. Howen, Tomahawk, Wis.; W. R. Clark, Kansas City.

Kansas City—Construction Company.—Incorporated: The Kansas City & Oklahoma Construction Co., capital \$200,000, by W. C. Edwards of Laurel, Kan.; C. N. Atkinson, N. A. Cramer, E. L. Massie, all of Kansas City; H. I. Cook of Buddington, I. T., and E. L. Massey, attorney, Kansas City.

Kansas City—Oil Mill.—The Union Cotton Oil and Meal Works will build (at Armourdale, Kans., near Kansas City) a cottonseed-oil mill of 120 tons daily capacity; plant will produce also meal, cake, etc., and is to cost about \$100,000.

Kansas City—Optical Manufactory.—The Kansas City Optical Co. has been incorporated, with capital stock of \$10,000, to manufacture optical goods, by B. G. Rhodes, A. J. Rhodes, C. W. Ayers and H. A. Stevens.

Oronogo—Lumber Company.—Incorporated: The Circle Lumber Co., capital stock \$6000, by Charles Wilson, H. W. Curry and J. C. Hedgecock.

Pierce City—Mining.—Chartered: The Tulsa Mining Co., with capital stock of \$3000, by J. M. Daugherty, T. E. Smithy, H. C. Calhoun and others.

Sedalia—Shoe Factory.—The Sedalia Shoe Manufacturing Co. has been incorporated, with capital stock of \$8000, by W. T. Hutchinson, S. H. Beiler, H. W. Harris and others.

St. Louis—Medical Company.—Incorporated: The O. F. Simmons Medicine Co., capital stock \$10,000, by O. F. Simmons, H. A. Simmons, N. Levy and H. P. Simmons.

St. Louis—Clay Company.—The Columbia Clay Co., capital stock \$500,000, has been incorporated by C. W. Gauss, Merrill Watson, Wm. W. Bolton and others.

St. Louis—Novelty Factory.—Incorporated: The Sessinghaus Novelty Co., for manufacturing novelties, signs, etc.; capital \$3000; incorporators, O. F. Sessinghaus, C. G. Sessinghaus, G. Sessinghaus, W. W. Graves, all of St. Louis, and R. M. Rankin of Chicago, Ill.

St. Louis—Mercantile.—Chartered: The Zeller Mercantile Co., by H. T. Zeller and others, with capital stock of \$10,000.

St. Louis—Art-glass Company.—Chartered: The Emil Frel Art Glass Co., to manufacture painted glass and figure windows, by E. Frel, B. Morrison, E. F. Kerwin and others; capital \$2000.

St. Louis—Elevator Company.—Conrad Kellerman, Henry F. Mueller, C. H. Trampe, C. E. Flack and others have incorporated the Mississippi Valley Elevator & Grain Co. to take up the business of the Farmers' Elevator Co.; capital stock \$325,000.

NORTH CAROLINA.

Charlotte—Machinery Company.—The Southern Machinery Co. has been incorporated, with capital stock of \$25,000, by Frank H. Reid, E. B. Springs, B. D. Springs and S. S. McNinch, to deal in machinery.

Cherryville—Cotton Mill.—S. S. Mauney, D. W. Aderholt and M. E. Rudasill have incorporated the Vivian Cotton Mills, with capital stock of \$20,000, and privilege of increase to \$2,000,000; purpose, to manufacture cotton goods.

Concord—Drug Company.—The Concord Drug Co., with a capital stock of \$2500, has been incorporated by John A. Sims, S. W. Williams and A. M. Brown.

Durham—Brick and Tile Works.—A. Max and D. B. O'Brian have organized the Eureka Brick & Tile Co. and will establish plant for brick-making; capacity, 50,000 daily; machinery has been ordered.

Durham—Tobacco Factory.—The Duke branch of the American Tobacco Co. will build a two-story brick storage-house 350x115 feet, work to be done by Wilkerson & Lawrence under the supervision of Col. W. J. Hicks; also intends to build a brick annex to the Blackwell factory storage-house, two stories, 250x150 feet.

Elizabeth City—Cotton Mill.—M. B. Culpeper is organizing a company to build a cotton mill capitalized at \$50,000.

Gastonia—Brick Works.—The Reid Brick Co., reported last week as organized, has incorporated, with capital stock placed at \$25,000; incorporators, Frank H. Reid, E. B. Springs, S. S. McNinch and B. D. Springs, all of Charlotte, N. C. Machinery for the plant has been bought. Frank H. Reid can be addressed at Charlotte.

Greensboro—Iron Foundry.—The Sergeant Manufacturing Co. has commenced the erection of a new foundry to replace that burned some time ago.

Henderson—Knitting Mill.—The company to be organized by Leon L. Strause, mentioned last week, will be known as the Seaboard Knitting Mills, with capital stock of \$50,000. Complete equipment has been purchased for manufacture of men's underwear. Mr. Strause is of Richmond, Va., where he can be addressed.

Hertford—Cotton Mill.—Efforts are being made for the organization of a \$100,000 company to build a cotton mill. Address L. W. Norman.

High Point—Basket Factory.—The Snow Basket Co. has been incorporated for the manufacture and sale of baskets, furniture and building material. The capital stock is \$10,000; incorporators, E. A. Snow, R. H. Wheeler and R. A. Wheeler.

Kings Mountain—Cotton Mill.—The Bonnie Cotton Mills (previously reported as proposed) has incorporated, with capital stock of \$100,000; incorporators, M. M. Carpenter & Bro., W. A. Mauney, J. G. Hord, J. H. White, W. A. Ware, S. P. Goforth, Chas. K. Gould and Jas. A. Ware; company will build cotton factory. Address J. S. Mauney.

Littleton—Water-power-Electrical Plant.—The Montauk Water & Electric Power Co. has applied for charter, its purpose being to develop water-power near Littleton and transmit 500 horse-power electrically for manufacturing and other purposes; John P. Leach, president; Eugene Johnston, secretary, and W. Lea Powell, treasurer. W. C. Kiddick, consulting engineer, can be addressed.

Louisburg—Chair Factory.—B. W. Ballard and others have incorporated the Franklin Manufacturing Co., with capital stock of \$6000, for the manufacture of chairs.

Mooreville—Telephone Company.—Chartered: The Mooreville Telephone Co., with capital stock of \$5000, by S. C. Rankin and others.

Oxford—Cotton Mill.—The Oxford Cotton Mill Co. has been organized, with capital stock of \$125,000, to build a factory. J. G. Hall is president, and C. J. Cooper, treasurer. Address the president.

Roanoke Rapids—Silk Mill.—The Patterson Textile Co. has completed its buildings, and is now installing silk machinery; Sam Patterson, president.

Rocky Mount—Oil Mill and Fertilizer Factory.—A stock company with capital of \$40,000 will be organized to build an oil mill and fertilizer factory; \$10,000 has been subscribed. Names of interested parties will be announced later.

Sandymust—Flour Mill.—Thomas Ferguson will build a roller flour mill.*

Taylorsville—Flour Mill.—Robert Ingram & Co. will build a roller flour mill.*

Weldon—Cotton Mill.—The Weldon Cotton Manufacturing Co., previously reported to build a spinning mill, will erect an additional two-story brick building 112x54 feet and install 2000 spindles for the manufacture of hosiery yarns; W. T. Shaw, president.

Wilmington—Paper Mill.—There has been talk of the erection of a paper mill, and Thos. H. McKoy has been mentioned in connection with same.

Wilson—Carriage Factory.—Hackney Bros. have awarded contract for large brick building.

Winston—Broom Factory.—W. H. Culnard and O. F. Brown will establish a broom factory; machinery all purchased.

Winston—Flour Mill.—R. J. Reynolds, W. A. Lemly, A. E. Holton, J. J. Wallace and others have incorporated the Forsyth Roller Mills, with capital stock of \$10,000, and privilege of increase to \$50,000, its purpose being to build a roller flour mill; J. J. Wallace will be manager; address him, care of R. J. Reynolds.

SOUTH CAROLINA.

Anderson—Cotton Mill.—The Anderson Yarn and Knitting Mills (which incorporated some time ago and intends to build a 5000 or 6000-spindle cotton mill, as lately stated) has filed notice of increase of capital stock from \$50,000 to \$200,000 and change of name to the Riverside Manufacturing Co.

Camden—Planing Mill.—Robert Team will

build a planing mill and possibly a sash, door and blind factory.

Camden—Brick Works.—The Camden Press Brick Co. is adding new machinery to its plant.

Charleston—Brewery.—J. S. Farnum, the new manager of the Germania Brewery, will improve the plant to the extent of \$25,000 for manufacturing a superior quality of beer and furnishing the State dispensary.

Charleston—Sash, Door, Blind, etc., Factory.—The Percival Manufacturing Co., lately reported incorporated to manufacture sash, doors, blinds, etc., has commenced business at the plant established by E. W. Percival some years ago, who has charge of the manufacturing department.

Clear Water (P. O. at Alken)—Bleachery, etc.—The Clear Water Bleachery & Manufacturing Co. has been incorporated, with capital stock of \$300,000, to establish a plant for bleaching cotton-mill products, etc. Incorporators are Charles Estes, Thomas Barrett, Jr., F. B. Pope and Landon A. Thomas, Jr., all of Augusta, Ga. Address Charles Estes.

Columbia—Cotton-pad Factory.—It is said that the McClain Manufacturing Co. of Greenfield, Ohio, contemplates removing its sweat-pad factory to South Carolina, and is now seeking a water-power site.

Columbia—Furniture Company.—Chartered: The Palmetto Furniture Co., by J. A. and Leon Weathersbee; capital \$1000.

Gaffney—Bleachery.—Hugo S. Dudenhoff contemplates establishing a bleachery, and wants machinery.*

Greer Depot—Cotton Mill.—W. W. Burgess, W. B. Smith, J. D. Ashmore, John H. Wyatt and others have incorporated the Greer's Mill, with capital stock of \$45,000 and privilege of increasing to \$150,000.

McColl—Cotton Mill.—F. P. Tatum, T. B. Gibson, A. W. Morrison, Charles Iceman and A. K. Odom have incorporated the Iceman Mills, with capital stock of \$200,000, to build a cotton factory of 10,000 spindles. Address Charles Iceman.

Pendleton—Oil Mill.—Chartered: The Pendleton Oil & Fertilizer Co., to manufacture cottonseed oil and meal and have a capital stock of \$20,000. The incorporators are W. M. Hunter, J. J. Sifton and S. L. Eskew.

Spartanburg—Cotton Mill.—The Beaumont Manufacturing Co. has increased its capital stock from \$60,000 to \$100,000; its spindles number 3072.

Warrenville—Kaolin Mines.—Dr. J. B. McMillan and J. R. Morris are organizing the Standard Kaolin Co., to be chartered with capital stock of \$15,000, for the purpose of developing kaolin beds near Warrenville. Address Dr. J. B. McMillan, Alken, S. C.

Winnabow—Creamery.—T. C. Ketchin, J. E. Matthews, S. C. Cathcart and F. A. Neil have incorporated the Winnabow Creamery Co., with capital stock of \$1000.

TENNESSEE.

Bristol—Hardware.—The Barker Hardware Co., capital \$50,000, has been incorporated by J. M. Barker, R. M. Crumly, M. B. Bushong, W. E. Lady and I. P. Farris.

Bristol—Foundry, Machine Shops, etc.—The Virginia Iron, Coal & Coke Co. has received from the city certain concessions that will ensure improvements and manufacturing enterprises on its lands in Northwest Bristol. The immediate results will be the erection of an iron rolling mill building, 100x700 feet; large puddling plant, 100x200 feet; machine shops, 100x304 feet; foundry, 100x192 feet; casting shed, 48x100 feet; boiler shop, two buildings, 50x100 feet and 50x80 feet; car shops, 50x125 feet; roundhouse, over 200 feet on a straight line from end to end of the semi-circle. The machinery for the rolling mill (previously reported) is already on the grounds and will be put in position as soon as the building for it can be erected; W. Graham, general superintendent.

Chattanooga—Furniture Factory.—O. G. Benedict of Ashley, Ohio, is reported as to build a furniture factory in Chattanooga.

Chattanooga—Automobile Company.—The Walden's Ridge Automobile Co. has applied for charter, with the following incorporators: S. T. Dewees, W. E. Raht, T. W. Fritts, B. F. Fritts and Jas. F. Johnston.

Chattanooga—Ice Factory.—G. O. Rinnan of the Blymer Ice Machine Co. of Cincinnati, Ohio, is investigating with a view to purchasing and operating the Lookout Ice Co.'s plant at Chattanooga; capacity will be forty-five tons per day.

Chattanooga—Industrial, etc.—The Lookout Mountain Land Co. has been incorporated by E. J. Smartt, Edward A. Brown, John P. Sanborn, P. F. Jones, C. A. Lyster, H. Bond, S. M. Chambliss and A. W. Cham-

Miss. The capital stock is \$75,000. The company's purpose is to encourage establishing industries, etc.

Chattanooga—Distillery.—The Lookout Distilling Co. is doubling its capacity, and will soon commence operations with the increased facilities.

Chattanooga—Broom Factory.—C. C. Dugger has established a broom and feather-duster factory at 329 West Ninth street.

Cumberland Gap—Woolen Mill.—A. B. Kesterson is adding considerable new machinery to his Cumberland Gap Woolen Mills. This plant was recently mentioned under Yellow Springs, but it has been bought by A. B. Kesterson and removed to Cumberland Gap.

Dunlap—Flour Mill.—A. L. Mausfield will improve and overhaul his 50-barrel flour mill.

Dyersburg—Flour Mill.—A company is being organized for the erection of a flour mill of 100 barrels capacity daily. Watt Smith will be secretary.

Dyersburg—Flour Mill.—H. A. Klyce contemplates the erection of a 250-barrel flour-mill addition to his corn and feed plant.*

Elizabethton—Flour Mill.—Hunter & Lacy will build a flour mill of forty barrels capacity daily.*

Hamilton County—Mining.—Charter granted the Hinch Mining Co., capital stock \$5000; incorporators, Galtner E. Hinch, John C. Hinch, Polk Brown, James G. Crumbliss and Hugh C. Crumbliss. Last-named is probably of Chattanooga.

Jellico—Coal Mines.—Logan C. Murray and others have bought the Bird's-eye coal mines and railroad for \$85,000 from the Whitley Coal Co.

Morristown—Road Improvements.—The county of Hamblen will vote on the 22d inst. upon issuing \$50,000 of bonds for road improvements. Address "County Clerk."

Mt. Pleasant—Laundry.—Efforts are being made to organize a company for the establishment of a steam laundry. Address J. A. Hostick, who has the matter in charge.

Nashville—Ice Plant.—The William Gerst Brewing Co. has let contract for the erection of a 40-ton ice plant.

Ridgely.—George H. Brush has patented a machine for pulling cotton stalks, and wishes to have same manufactured.*

Ripley—Supplies.—Incorporated: Halls Supply Co., capital \$5000, by I. B. Tigrett, H. B. Tigrett, W. H. Saulsbury, E. Hart and W. D. Powell, all of Halls, Tenn.

Santa Fe—Flour Mill.—J. M. Meacham of Pinewood, Tenn., contemplates building a flour mill.*

Shelby County—Brick Company.—Charter granted the Tennessee Brick Co., with \$30,000 capital stock; incorporators, O. H. P. Pepper, Thomas W. White, R. A. Speed, John J. Bishop and J. L. Watts.

South Pittsburg—Coal Mines.—N. F. Thomas & Sons have leased and will develop coal lands.

South Pittsburg—Drugs.—Incorporated: The Sartale Drug Co., capital \$6000, by T. W. Johnson, T. S. Richards, L. B. Sartale, G. Mitchell and J. P. Gillen.

Telford—Flour Mill.—W. A. Maloney, Jr., contemplates adding new machinery to his mill; also a small dynamo for lighting.*

Tullahoma—Tobacco Factory.—W. W. Ford will establish a tobacco factory.

TEXAS.

Beaumont—Woodworking Factory.—A company is being formed, with capital stock of \$100,000, for the establishment of a wood-working factory; will also manufacture boxes, coffins, excelsior, etc.

Bryan—Street Improvements.—The city will vote April 3 upon issuing \$9900 in bonds for street improvements. Address "The Mayor."

Bryan—Cotton Gin.—The Bryan Oil Mill Co. has let contract for the erection of a gin of 200 bales capacity daily.

Celeste—Cotton Mill.—Efforts are being made for the organization of a company to build a cotton mill. About \$50,000 has been subscribed. Names of interested parties will be announced later.

Commerce—Telephone Company.—The Commerce Telephone Co. has been incorporated, with capital stock of \$3000, by W. B. De Jennett, T. W. Thompson, G. W. Apperson and others.

Cooper—Electric-light Plant.—The city council has granted franchise for the construction of an electric-light plant. Probably "The Mayor" can inform.

Corn Hill—Water-works.—Incorporated: The Corn Hill Water-Works Co., capital stock \$5000, by W. T. Dunn, C. C. Foster, T. N. Dunn and others.

Cuero—Soap Factory.—The Cuero Cotton Oil Co. is mentioned in connection with the proposed establishment of a soap factory to cost \$5000; Al Hamilton, manager.*

Cuero—Cotton Mill.—It is proposed to organize a \$100,000 stock company for the establishment of a cotton mill. Otto Buchel can be addressed for information.

Denison—Knitting Mill.—Efforts are being made to establish a plant for the manufacture of hosiery and underwear. Address J. A. Smith, manager American Cotton Spinning Co.

Dodd City—Oil Mill.—Incorporated: The Dodd City Oil Mill Co., capital stock \$40,000, to construct and operate a cottonseed-oil mill; incorporators, S. D. McGee, G. A. Mills, J. U. Harris and others.

Fort Worth—Paper Manufacture.—Thomas Her of Boston, Mass., has been in Fort Worth lately relative to the establishment of a factory to utilize cornstalk for manufacturing paper, etc.

Fort Worth—Packery.—Jacob C. Dold of Kansas City, Mo., has submitted a proposition to the Board of Trade to build a \$1,000,000 packery at Fort Worth, he and associates to take \$750,000 of the stock, provided Fort Worth citizens will subscribe \$250,000.

Galveston—Baking Powder, etc., Factory.—The Southern Coffee Co., reported recently as incorporated, will establish a plant for roasting coffee, grinding spices, making baking powder, sauces, extracts, etc.; plant will be operated in the Friedberg-Klein building, Strand, near Rosenberg avenue; D. E. Crossland, president.

Greenville—Refinery and Soap Factory.—J. B. Dale, Jr., manager of the Greenville Oil & Cotton Co., is having plans made by Mr. Thiessen of Sherman, Texas, and will soon award contracts for buildings, machinery, tanks, etc., for a \$100,000 refinery and soap factory.

Henderson—Cotton Mill.—It is reported that \$100,000 has been subscribed for the organization of the Rusk County Cotton Mill to build a factory.

Hillsboro—Cotton Mill.—A. L. Lowery, E. M. Turner, E. S. Davis, G. L. White, T. E. Tomlinson and others are organizing a \$100,000 stock company for establishment of a cotton mill.

Hillsboro—Broom Factory.—A. L. Lowrey proposes establishing a broom factory.

Jefferson—Iron Furnace.—It is rumored that the Jefferson Iron Co. will build another furnace.

Lott—Cotton Compress.—T. F. Glass and F. G. Minnock are installing a square-bale compress.

Marshall—Shops.—The Texas & Pacific Railroad Co. will build shops at Marshall; main building will be 500x100 feet; wood-working shops, 100x200 feet; cabinet shop, 100x100 feet; blacksmith shop, 100x60 feet; all to be of pressed brick and let by contract; L. S. Thorne, general manager, Dallas, Texas.

Mexia—Cotton Mill.—M. E. Roberts, N. P. Haux and H. E. Jackson are organizing a company to build a cotton factory.

Powell—Cotton Gin.—A \$25,000 stock company is being organized to build a cotton gin. Rockdale—Lignite Mines.—Col. W. B. Woody has leased 214 acres of land, on which he will open lignite mines.

Sherman—Plow Works.—An Indiana plow-manufacturing company is corresponding with the Young Men's Business Association relative to the removal of its plant to Sherman.

Temple—Ice Plant.—Incorporated: The Temple Cold Storage & Ice Factory, capital stock \$30,000, by A. Nicored, A. T. Stevens, P. L. Downs and others.

Temple—Compress.—The Exporters' Compress Co. has been incorporated, with capital stock of \$30,000, by J. M. Dorrance, C. C. Malinguy, A. L. Nelms and others, all of Houston, Texas.

Uvalde—Water-works.—Incorporated: The Uvalde Water-Works Co., capital stock \$15,000, by John F. Simpson and Will Benson, Jr., of Uvalde, and John H. Clark of San Antonio.

Waco—Telephone Company.—The Lone Star Telephone Co. has been incorporated, with capital stock of \$500,000, to construct and operate telephone and telegraph lines in Texas; incorporators, J. B. Earle, J. E. Boynton of Waco, H. M. Aubrey, F. C. Smith of San Antonio and others. Principal office will be in Austin.

Waxahachie—Cotton Mill.—The proposed company has organized as the Waxahachie Cotton Mills and elected E. A. Du Bose, president; L. C. Todd, secretary, and J. H. Miller, treasurer. Company's capital stock is \$100,000. Address the secretary.

Wolfe City—Flour Mill.—The Modlin Milling Co. has been organized for the erection of the proposed flouring mill; W. M. Modlin, president; W. P. Maloney, vice-president, and M. L. B. Seaman, secretary.

VIRGINIA.

Crimora Station—Flour Mill.—J. Lee Kolner will build a flour mill.*

Danville—Ice Plant.—The Crystal Ice & Power Co., reported last week as incorporated, will build a 25-ton ice plant, and has let contract for its construction; D. A. Overbey, president.

Draper—Flour Mill.—S. D. Conner of Pulaski City, Va., and others will build a flour mill at Draper.

Elkton—Flour Mill.—William H. Marshall will build a flour mill of fifty or seventy-five barrels capacity.

Luray—Flour Mill.—L. Riddlerberger contemplates remodeling his flour mill.

Lynchburg—Paper-box Factory.—The Lynchburg Paper Box Co. has let contracts for the erection of its new factory, lately burned. The new factory will have a larger capacity than the former one had. Plant will be in operation by April 1, producing 10,000 boxes daily.

McGaheysville—Flour Mill.—Herbert Lewling & Bros. will erect a flour mill of fifty to sixty barrels capacity daily.

Norfolk—Cold-storage Plant.—L. Fuerstein & Co. have completed the installation of a plant for freezing fish; capacity, 2000.

Richmond—Furniture Factory.—William Gratznowsky has organized a company for the erection of a furniture factory.

Richmond—Paint and Oil Factory.—R. L. Peters and capitalists of New York are planning the erection of a paint and oil factory.

Richmond—Lumber and Warehouse Company.—A bill has passed the legislature incorporating the Piedmont Lumber & Warehouse Co. to conduct a business implied by its title, with capital stock of from \$10,000 to \$25,000; incorporators, C. H. Richards, C. W. Miller, E. L. Johns and others.

Richmond—Conduit System.—The Virginia Conduit Railway Co. has organized, electing Capt. Andrew Pizzini, Jr., president; W. S. Forbes, vice-president, and W. B. Davie, secretary-treasurer; charter will be applied for, with capital stock at \$1,000,000; company will establish conduit systems and manufacture appliances therefor.

Rileyville—Flour Mill.—J. H. Goehenour will remodel his flour mill.*

WEST VIRGINIA.

Fayette County—Coal and Timber Lands.—C. H. Voegle and Charles Ackermann, trustees for a syndicate of Mansfield (Ohio) parties, have purchased 340,000 acres of coal and timber lands in Fayette, Kanawha and Raleigh counties belonging to Basil B. and Douglas H. Gordon of Baltimore, Md., and will develop the property on an extensive scale. The sale was negotiated by Chilton, MacCorkle & Chilton of Charleston and H. A. Robson of Cotton Hill.

Germania—Tannery.—J. G. Hoffman & Sons of Wheeling will enlarge and improve their tannery at Germania, including the erection of a two-story building 100x300 feet, to be used for vats, costing over \$10,000.

Harmar—Flour Mill.—J. W. Morral will build a roller process flour mill.

Henry—Saw-mill.—R. Chaffee has constructed a tramroad to a body of timber, where he will build a large saw-mill to cut lumber and pulp wood.

Keyser—Furniture Factory.—Richardson Bros. are placing new engines and other machinery in their furniture factory to double output.

Keyser—Quarries.—The Standard Lime & Stone Co. of Baltimore, Md., is opening quarries near Keyser; stone will be prepared for bridge and building purposes.

Montgomery—Electric-power Plant.—The Kanawha Electric Co. will build a power plant to supply its proposed electric railway; E. W. McCormick, manager.

Morgantown—Oil Wells.—The Iroquois Oil Co. has been organized, with C. B. Dille, D. H. Courtney, Joseph H. McDermott, William S. Stevenson and I. C. White as incorporators, and will at once begin the development of a number of leases.

Sewell—Coal and Coke Company.—Chartered: The Andover Coal & Coke Co., with authorized capital of \$150,000, by Capt. J. A. McGuffin of Sewell, C. T. Jones of Red Star, F. E. Walker of Dun Loup and others.

Wheeling—Crematory.—The plans of City Engineer White for a new crematory (reported last week) have been accepted, and he will advertise for bids; plans call for

practically a new crematory, and bids will be asked for separately on the furnace, masonry and roof, the latter to be of corrugated iron.*

BURNED.

Athens, Ga.—The People's Ice Works, owned and operated by D. J. Boynton; estimated loss \$2000.

Braganza, Ga.—William Guy & Son's saw-mill.

Clarksville, Tenn.—Courthouse of Montgomery county; loss about \$100,000. Address "County Clerk."

Dayton, Tenn.—The Gem City Flouring Mills, leased and operated by John M. John T. and Robert T. Howard; estimated loss \$5400.

Embreeville, Tenn.—Foundry and machine shops of the Virginia Iron, Coal & Coke Co.; office at Bristol, Tenn.; W. Graham, general superintendent.

Halifax, N. C.—Walter Clark's hotel; loss \$15,000.

McDonald's Mill, Ga.—J. S. Bailey & Co.'s saw-mill.

Meridian, Miss.—Meridian Planing Mills; loss \$4000.

Port Gibson, Miss.—The Port Gibson Cotton Compress; loss \$100,000.

Richmond, Va.—Richmond Guano Co.'s factory; loss \$3000.

Shelbyville, Tenn.—Duck River Mills (flour mill). J. N. Pace & Co., proprietors; loss \$2500.

BUILDING NOTES.

Atlanta, Ga.—Office Building.—A. B. Steele has bought for \$35,000 land and buildings. It is reported he will raze the buildings and erect a seven-story office structure, with stores on ground floor.

Augusta, Ga.—Masonic Temple.—The Masonic Order, Frank H. Miller, chairman, will build a four-story temple.

Bennettsville, S. C.—Residence.—J. F. Everett will build a residence.

Birmingham, Ala.—Business Building.—The Milner & Kettig Co. has asked for bids on the erection of its proposed building, lately mentioned; bids will be opened April 25; building to be five stories and basement, 100x150 feet, etc.

Bolingbroke, Ga.—Courthouse.—The county commissioners have purchased site and will erect a courthouse. Address "The County Clerk."

Brunswick, Md.—Bank Building.—The Brunswick Savings Bank will erect an office building.

Charlotte, N. C.—Residence.—Dr. Annie Alexander has employed Hook & Sawyer to prepare plans for a new residence.

Charlottesville, Va.—Business Building.—The Mitchell Company, law publisher, proposes to erect a large building for printing establishment.

Chimney Rock, N. C.—Hotel.—A \$30,000 company is being organized to build a hotel. Probably R. B. Clark of Rutherfordton, N. C., can say who is interested.

Clarksville, Tenn.—Courthouse.—Montgomery county will build a new courthouse to replace the one just burned. Former building cost \$100,000, and new one will probably cost much more. Address the "County Clerk."

Concord, Tenn.—Hotel.—It is rumored that Mr. Plummadore will build a hotel.

Covington, Va.—Dwellings.—The West Virginia Pulp & Paper Co. of Luke, Md., will erect twenty new houses at Covington.

Douglas, Ga.—Business Block.—Quincy & Macdonald are having plans prepared for a brick business block and hotel.

Ensley, Ala.—Church.—The plans and specifications for the Catholic church have been completed, and bids will soon be called for. Address Rev. Father Kennedy.

Fairmont, W. Va.—Hospital.—J. C. Jones of the Withrow Lumber Co. of Charleston, W. Va., has received contract for building State Hospital No. 3 at Fairmont; building will cost \$50,000.

Gaffney, S. C.—Residence.—Hon. A. N. Wood will build a brick residence after plans by Hook & Sawyer of Charlotte, N. C.

Galveston, Texas—Clubhouse.—The Galveston Tarpon Club will erect a home building.

Greenville, S. C.—Warehouse.—Lipscomb & Russell will build a warehouse.

Greenville, S. C.—Rectory.—Christ Church will build a rectory. H. C. Beattie can give information.

Halifax, N. C.—Hotel.—A company will be formed to rebuild the burned Walter Clark

Hotel; new building to cost probably \$20,000 or over. Address Walter Clark.

Hartley, Texas.—Bids will be received until April 9 for removal of two-story rock jail from Hartley to Channing. For particulars address Ben Lawson, county clerk, Channing, Texas.

Jackson, Miss.—Capitol.—The legislature has passed an act providing for the issue of \$1,000,000 in bonds for the construction of a new State capitol at Jackson. Competitive designs by architects will be advertised for. The commission having the matter in charge is composed of Gov. A. H. Longino, Attorney-General McClurg and Messrs. Stoval, Rush and Hardy. Address Gov. A. H. Longino.

Kansas City, Mo.—Warehouse.—The McCormick Harvesting Machine Co. will build a six-story warehouse to cost from \$75,000 to \$100,000. W. B. Browning, local manager.

Leaksville, N. C.—Hotel.—The Water-Power & Land Co. will erect a 40-room hotel after plans by Hook & Sawyer, Charlotte, N. C.

Louisville, Ky.—Stores.—Dodd & Cobb are preparing plans for three storehouses 100x164 feet, to cost \$100,000, for J. M. Atherton.

McColl, S. C.—Hotel.—Thos. B. Gibson has about completed the structure for his \$7000 brick hotel; electric lighting, heating plant, water system, etc., will be put in.

Memphis, Tenn.—Hotel.—A movement is on foot for the building of a hotel to cost about \$500,000 to replace the Gayoso Hotel that was burned some months since. L. P. Parker of Cairo, Ill., can give information.

Montevallo, Ala.—Theater.—George Kroell will build an opera-house.

New Orleans, La.—Docks.—It is intimated that the Southern Pacific Railroad will construct an entirely new system of docks at Algiers; C. P. Huntington of New York city, president.

New Orleans, La.—Jail.—Bids will be received until April 9 for the erection of a jail in accordance with plans and specifications on file in office of city engineer. For \$20 (cash or certified check) a copy of plans, etc., can be obtained; unsuccessful bidders can have this amount refunded on return of plans in good condition; W. S. Douglass, comptroller.

Paducah, Ky.—Building.—Clark-Danforth Handle Co., Lawrenceville, Ill., wants bids on erection of a two-story frame building 100x60 feet, with iron roof.

Raleigh, N. C.—School.—Contract for erection of Wiley School building awarded to Zachary & Zachary at \$11,831.81.

Raleigh, N. C.—School Building.—The Agricultural and Mechanical College will erect a building for its textile-school department; proposed structure to be two stories high, 75x175 feet, modeled as a cotton factory.

Richmond, Va.—Building.—Charles E. Hunter is having plans prepared for a five-story building 43x138 feet.

Saluda, S. C.—J. M. Forrest has asked bids on the erection of a two-story 80x90-foot building.

Savannah, Ga.—School Building.—Trustees of Chatham Academy invite architects to submit plans for school building by April 25. Address Henry C. Cunningham, chairman building committee.

Spray, N. C.—Hotel.—Hook & Sawyer of Charlotte will prepare plans for W. R. Walker's proposed hotel, to be known as "Spray Inn."

Tampa, Fla.—Business Building.—Mrs. Julia A. Friebele will erect a three-story business building, 90x105 feet, to have elevators, etc.; construction of brick, with steel skeleton.

Washington, D. C.—Dwellings, etc.—R. W. Walker & Son will erect eleven houses, each to have hot-water heat, hardwood finish, etc.; plans by F. B. Pyle. F. B. Pyle has prepared plans for residences for Frank Underwood and for William L. Lanning.

Washington, D. C.—Asylum Buildings.—Henry Simpson of Barry & Simpson has completed plans for new buildings to be erected in the suburbs by St. Vincent's Orphanage. Building will be 136x235 feet, with 90-foot tower over entrance; will have laundry, iron stairways as fire-escapes, etc.

Wilmington, N. C.—Hall.—The Howard Relief Fire Engine Co. will erect a hall building. J. L. Gieschen can be addressed.

RAILROAD CONSTRUCTION.

Railways.

Allendale, S. C.—The Manufacturers' Record is officially informed that the extension of the Southern system from Allendale to Hardeeville will probably be built this year by the company. Surveys are now being

made over the route, which is about fifty-four miles in length. W. H. Wells at Washington is chief engineer.

Asheville, N. C.—It is reported that the Southern Railway Co. has been securing estimates for improving its line between Asheville and Chattanooga at an expense of about \$1,000,000. The improvements will include lowering the grade at several points and the placing of heavier rails on portions of the track. W. H. Wells at Washington is chief engineer.

Asheville, N. C.—D. J. Barnes, engineer of the Intermontane Street Railroad Co., writes the Manufacturers' Record that E. R. Bliss of Chicago has purchased this line, which is three miles in length. It is to be extended to Weaverville, a distance of six and one-half miles. Water-power will be secured from Baird's Falls, which, it is expected, will develop 300 horse-power.

Ashland, Ky.—The Ohio Valley Railway Co. will receive bids until March 31 for the eight-mile electric line which it proposes building between Central City and Big Sandy river. It will be a portion of the system which it is proposed to complete connecting Huntington, Ashland and other towns. Gillmor Brown, at Ashland, is chief engineer.

Beaumont, Texas.—It is reported that the railroad controlled by the Beaumont Wharf & Terminal Co., which was begun several years ago, is to be completed at once, as arrangements to that effect have been made. W. S. Davidson is president of the company.

Bristol, Tenn.—The Virginia Coal, Iron & Coke Co. is reported as having arranged to construct a railroad five miles long to Isabella, Tenn., from a connection with the Atlanta, Knoxville & Northern road.

Cape Girardeau, Mo.—Edward Hidden, vice-president of the Southern Missouri & Arkansas Railroad, and others have chartered the Southern Missouri & Illinois Railroad & Bridge Co. The company proposes constructing a line from Cape Girardeau to Gray's Point, on the Mississippi river, and to build a bridge across the river. The line will probably be an eastern extension of the Southern Missouri & Arkansas.

Chattanooga, Tenn.—Messrs. Condon & Callahan of Knoxville, Tenn., have secured the contract for constructing about one and one-half miles of line on the Cincinnati Southern near what is known as Mud Tunnel.

Clemson College, S. C.—The authorities of the Clemson Agricultural College are considering the question of building a railroad about two miles long to connect with the Southern system. The president of the college may be addressed at Clemson.

Corsicana, Ky.—The parties promoting the Corsicana & Sabine Pass Railroad have secured the charter. Surveys have already been made for the line. Among those interested are F. C. Hand and H. C. Ailyn.

Crossville, Tenn.—It is stated that the section of the Tennessee Central Railroad now under construction between Monterey and Harriman will be completed and ready for operation as far as Crossville by July 1. A large number of bridges have been placed in position, and tracklaying is now in progress between Monterey and Crossville. Jere Baxter at Nashville is president of the company.

Cumberland, Md.—Surveys are being made for a feeder of the Baltimore & Ohio along the Castleman river. The road will reach coal deposits controlled by Messrs. Jennings Bros., and will be about twelve miles in length. It is stated that grading will begin upon it at an early date. J. M. Graham at Baltimore is chief engineer of the Baltimore & Ohio.

Cumberland, Md.—The latest report concerning the electric line between Cumberland and Westport is to the effect that construction work is to begin about May 15. J. W. Burchinal of Moundsville, W. Va., is one of the principal promoters.

Denison, Texas.—The work of grading the extension of the St. Louis & San Francisco Railroad between Sapulpa, I. T., and Denison has begun at the southern terminus. Messrs. Johnston Bros. & Faught, temporary address Sapulpa, are general contractors for the company.

Dublin, Ga.—The business men of Dublin are negotiating with Messrs. F. B. Stubbs & Bro. to extend the railroad controlled by this firm to Dublin; also to a connection with the Georgia & Alabama Railroad. The extension would be about twelve miles in length.

Durham, N. C.—It is stated that Raleigh capitalists are interested in the proposed electric line between Durham and Chapel Hill, a distance of twelve miles.

Eureka Springs, Ark.—It is stated that the St. Louis & North Arkansas Railroad Co., building a line between Eureka Springs and

Harrison, proposes a further extension to Yellville, which would make the total length of the road 138 miles. It is calculated to complete the first fifty miles by October 1. The contract for the line has been let by John Scullin of St. Louis, president of the company.

Fairmont, W. Va.—The plan to build a railroad from Fairmont to Blacksville is being promoted by the Pittsburg & Fairmont Short-line Railroad Co. Among the incorporators are Thomas W. Fleming and Charles G. Manley of Fairmont. It is understood that this line if built will be in the interest of the Baltimore & Ohio.

Hagerstown, Md.—The Hagerstown & Frederick Railway Co. is considering the adoption of electric power instead of steam on its line.

Hampton, Va.—George L. Smith of Yorktown, Va., one of the promoters of the electric line between Hampton and Yorktown, states that it is to be built as soon as possible. It will connect with the Old Point, Hampton & Newport News road, and is being promoted by local parties.

Huntsville, Ala.—The plan to connect Huntsville with Birmingham by a more direct line than at present is again being agitated by the business men of both cities. The route formed is by way of Oneonta. It is calculated that about fifty miles of line would be required.

Johnson City, Tenn.—The East Tennessee & Western North Carolina Railway Co., it is stated, is considering an extension from the present terminus, Cranberry, N. C., to Lincoln, N. C., a distance of about seventy-five miles. It is understood that surveys for this extension were made some time ago. R. F. Hoke of Raleigh is president, and C. H. Nimmon of Cranberry, general superintendent.

Kansas City, Mo.—It is stated that business men of Cameron, Mo., are interested in a railroad from Kansas City to Cameron, a distance of about fifty miles.

Keyser, W. Va.—William C. Clayton and William MacDonald of Keyser are interested in the Patterson's Creek & Potomac Railroad Co., which proposes building a line in Mineral county to the boundary between West Virginia and Maryland. It will be a feeder of the Baltimore & Ohio if constructed.

Laurel, Miss.—F. W. Pettibone, superintendent of the Kingston Lumber Co., which is constructing a line between Laurel and Forest, Miss., writes the Manufacturers' Record that it is calculated to build about thirty miles during the next eighteen months. At present the company has thirteen miles in operation and four miles under construction. It is completing the road with its own force of hands.

Little Rock, Ark.—It is stated that E. J. Rosenfeld and S. M. Martin are interested in the proposed Arkansas Northern Railroad, projected between Little Rock and Springfield, Mo., by way of Yellville, Ark., a distance of 175 miles. Right of way is being secured for the line. W. B. Worthen of Little Rock is also reported as associated with the enterprise.

Littleton, W. Va.—Joseph K. Graham and W. M. Hammond of Wheeling are interested in the Fish Creek Railroad Co., recently chartered to build a line from Littleton, in Wetzel county, to Moundsville, a distance of fifteen miles.

Lynchburg, Tenn.—Peter Klein and E. D. Terry of Aurora, Ill., and J. Y. Garlington of Atlanta, Ga., are interested in the proposed electric line between Lynchburg and Wartrace, recently referred to in the Manufacturers' Record. Another survey is to be made at once.

Norfolk, Va.—It is reported that the Norfolk & Western Railroad Co. has determined to construct a line between Petersburg and Richmond in order to have its own tracks into Richmond. At present it is utilizing the tracks of the Atlantic Coast Line between these cities. The extension would be twenty-five miles in length. Henry Fink at Roanoke, Va., is president of the company.

Peach Orchard, Ky.—H. H. Keys of Ashland, Ky., is president of the Peach Orchard Coal Co., which has let a contract for a short railroad line to coal mines which it controls.

Poplar Bluff, Mo.—The Southern Missouri & Arkansas Railroad Co. is negotiating with the business men of Poplar Bluff to construct a branch to that town, a distance of ten miles. The road is now in operation between Cape Girardeau and Hunter, a distance of ninety-four miles. Edward Hidden at Cape Girardeau is vice-president of the company.

Queenstown, Md.—The Queen Anne's Railroad Co. has been considering the construction of an extension from Queenstown to a

point on Kent Island, a distance of twelve miles. If built it would be connected with a ferry line to Baltimore and possibly Washington. William H. Bosley, at Baltimore, is president of the company.

Roanoke, Va.—It is reported that the plan of extending the Baltimore & Ohio from Lexington to Roanoke has been revived, and that the Chesapeake & Ohio may also utilize the extension of the Baltimore & Ohio to reach the city. Mayor James P. Woods of Roanoke is reported as interested in the scheme.

Selma, Ala.—F. M. Abbott of West Point, Miss., has purchased the Birmingham, Selma & New Orleans Railroad, extending between Selma and Martins Station, a distance of twenty miles. It is reported that the railroad may be extended to Linden, Ala., a distance of thirty miles, through a part of Marengo county.

Shreveport, La.—The Shreveport & Red River Valley Railroad Co. has let a contract for a further extension of its line from St. Maurice to Colfax, La., and it is understood that work is to begin at once. The route of the line is by way of Boyce, where a bridge will be constructed across the Red river. The extension will be twenty-five miles in length. P. McIlvried at Shreveport is general manager of the company.

Smithton, Ark.—The Southwest Arkansas & Indian Territory Railroad has been sold to Murray Carleton of St. Louis, and it is understood is to be extended at once from its present terminus further west. It is now in operation between Smithton and Pike City, a distance of thirty-four miles. P. B. Price at Smithton is auditor of the company.

Spartanburg, S. C.—F. M. Stearns of Cleveland, Ohio, has taken up the project to build a railroad between Spartanburg and Rutherfordton. This line has been promoted by a company called the Polk County Railroad Co. The county named has voted \$100,000 in bonds in aid of the project. The line, if built, will be thirty-five miles in length.

St. Louis, Mo.—The St. Louis, St. Charles & Western Railway Co., it is stated, has decided to extend its line between St. Louis and St. Charles, and has let a contract for a section five miles in length.

Stuttgart, Ark.—It is reported that John M. Taylor of Pine Bluff, Ark., and others, who are interested in the Stuttgart & Arkansas River Railroad, are considering the question of extending it to Hazen, where it would connect with the Choctaw, Oklahoma & Gulf Railroad. The extension would be twenty miles in length.

Terrell, Texas.—The report is again current that the Texas Midland Railway Co. has determined to extend its line to a point on the Gulf of Mexico. It is stated that the probable terminus will be at a point near Victoria. E. H. R. Green at Terrell is president of the company.

Thomasville, Ga.—J. R. Blair and others have made a proposition to the town of Thomasville to construct the railroad between Thomasville and Deaton, in Davidson county, if the town will donate \$10,000 in 5 per cent. bonds.

Thurber, Texas.—It is reported that engineers are now making surveys for the proposed railroad being promoted by the Texas & Pacific Coal Co. of Thurber.

Tupelo, Miss.—It is reported that the promoters of the Tupelo & Decatur Railroad have made arrangements with Eastern parties to finance this project by floating \$5,000,000 worth of bonds, and that contracts will be let in the near future. The line is proposed from Decatur, Ala., to Arkansas City, Ark., a distance of about 200 miles. H. C. Medford of Tupelo is acting president of the company.

Waco, Texas.—The Texas Central Railway Co., it is understood, is considering an extension from Dublin to Thurber by way of Stephenville, Texas. Charles Hamilton at Waco is general manager of the company.

Wheeling, W. Va.—Right of way is being secured for the proposed Uniontown, Waynesburg & West Virginia Railroad proposed between Wheeling and Uniontown, Pa. Among those interested is James R. Barnes of Uniontown, Pa.

Wortham, Texas.—It is reported that four miles of the Union Central Railroad under construction between Wortham and Fairfield have been completed, and eight miles graded. The Atlas Construction Co. at Wortham has the general contract.

Street Railways.

Nashville, Tenn.—The People's Electric Railway Co. has been formed to build an electric line in the city and suburbs. It is stated that the company proposes constructing about forty-eight miles of track in all.

Richmond, Va.—It is stated that the Rich-

mond Passenger & Power Co. will probably relay a large portion of its track in the city with girder rails, as it has accepted a franchise allowing it to make these improvements.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Air Compressor.—Essex, 514 Main street, East Orange, N. J., wants an air compressor, six to eight-inch machine.

Barrels.—See "Tanks."

Beltting.—See "Woodworking Machinery."

Bending Rolls (hand).—See "Machine Tools."

Blast-heating Furnace.—See "Foundry Equipment."

Bleachery.—Hugo S. Doderhoff, Gaffney, S. C., wants to correspond with manufacturers of bleachery equipments.

Blower.—See "Foundry Equipment."

Boiler.—Box 133, Montgomery, Ala., wants to buy boiler of fifty horse-power.

Boiler.—Warner Moore & Co., Richmond, Va., is in want of a second-hand 50 or 60-horse-power return-tubular boiler, with front stack and grate-bars.

Boiler.—Blunt & Word, Greensboro, Ala., want a new 100-horse-power boiler.

Boiler and Engine.—See "Woodworking Machinery."

Boiler and Engine.—T. Oregon Lawton, Estill, S. C., wants prices on 20 to 30-horse-power engine and boiler to match; new or second-hand.

Boilers and Engine.—Dasher Lumber Co., Valdosta, Ga., is in the market for three 80-horse-power return-tubular boilers and a 100-horse-power engine.

Boiler and Engine.—Jas. A. Martin, Johnson City, Tenn., wants second-hand boiler and engine, twenty to twenty-five horse-power, suitable for portable saw-mill; can use either on wheels or skids.

Boiler and Engine, etc.—Abbeville Electric Light & Power Co., Abbeville, S. C., is in market for 75-horse-power boiler and engine, with feed-water heater and steam pump for feed water.

Boilermakers' Tools.—Union Iron Works Co., Selma, Ala., wants prices on a set of eight foot-power rolls, beveling shear to bevel plate up to three-eighths inch thick both on straight line and curve, power punch to punch up to one-half inch thick, 36-inch throat; good second-hand will answer.

Boilers and Engines.—B. F. Finney, 110 Bryan street, E., Savannah, Ga., wants to correspond with manufacturers of boilers and engines.

Boring Machinery.—C. H. Norton, Durham, N. C., wants to buy a boring machine to bore columns up to sixteen feet long.

Brick Machinery.—W. R. Satterfield Brick Co., W. R. Satterfield, president, is in want of a repress brick machine, hand press.

Bricks.—The Ouachita Cotton Mills, Monroe, La., is advertising for 1,250,000 brick to be furnished and laid in the walls. Party can either ship brick or burn them at Monroe.

Bridge Works.—Entire plant of machinery and equipment for bridge works at New Decatur, Ala., will be wanted. Address Frank Conger, president Groton Bridge & Manufacturing Co., Groton, N. Y. (This item also noted last week.)

Building Materials.—See "Brick."

Building Materials.—Zachary & Zachary, Raleigh, N. C., are in the market for all materials to be used in erection of school building.

Carbide Cans.—C. R. Caldwell, secretary Acme Acetylene Gas Co., Staunton, Va., wants addresses of manufacturers of carbide cans and tops.

Coffin Manufacturers.—J. C. Brannan, Athens, Ohio, wants to correspond with manufacturers of knocked-down coffins.

Cotton Ginneries.—Brick Ginhouse Co., Lake

City, Fla., wants full description and prices of ginneries for treating Sea Island staple.

Cotton-gin Supplies.—Box 23, Florence, S. C., wants seed-cotton fan for four gins, second-hand.

Cotton-mill Machinery.—Cordele Cotton Mills, Cordele, Ga., wants to correspond with manufacturers of cotton-mill machinery.

Crematory.—City Engineer White, Wheeling, W. Va., will call for bids for new crematory; bids are wanted separately on the furnace, masonry and roof, the latter to be of corrugated iron.

Crematory.—Bids will be received until April 16 for the construction of a garbage incinerator or destructor at Honolulu, H. I.; specifications at office superintendent public works, and at Hawaii consulate, San Francisco, Cal., and at Hawaiian consulate, 63 Wall street, New York.

Distilling Apparatus.—B. F. Finney, 110 Bryan street, E., Savannah, Ga., wants to correspond with manufacturers of vacuum apparatus and stills.

Dry-kiln Supplies.—See "Engine Lathe."

Electrical Machinery.—W. A. Maloney, Telford, Tenn., will probably buy a small dynamo for lighting.

Electric-light Plant.—W. J. Rice, Morehead, Ky., wants to correspond with manufacturers of electric-light-plant equipments; also with contractors.

Electric Plant.—Date of opening bids for erection of electric-light and power plant, lately noted, for city of Houston, Texas, has been postponed to April 20. For particulars address Wm. Baugh, secretary.

Elevator.—Fern Rock Woolen Mills, Amber and Wishart streets, Philadelphia, Pa., wants one-ton power elevator.

Elevator.—See "Woodworking Machinery."

Engine.—Seward Trunk & Bag Co., Petersburg, Va., wants to purchase an engine of 100 horse-power.

Engine.—W. M. Abshee Co., North Wilkesboro, N. C., wants second-hand engine, fourteen to sixteen horse-power, center crank.

Engine Lathe.—"A. F.," 650 Third avenue, New York, wants a second-hand engine lathe, six to eight feet between centers; also large heater coil for dry-kilns.

Engines.—C. P. Stewart, Roundpeak, N. C., wants catalogues of engines.

File-cutting Machines.—Pietro Biancotti, Turin, Italy, wants the following file-cutting machines: From 19 to 22-inch soft, half-soft, bastard, coarse bastard, coarse and extra coarse; from 6 to 12-inch extra soft, soft and demi-soft, bastards and for blanks; from 8 to 20-inch extra soft, soft, demi-soft, bastards and for blanks from eight to twenty-two inches; from 3 to 10-inch extra soft, soft, demi-soft, bastards and for blanks; for cutting only of blanks of files case hardened and of bastards.

Filter Plant.—Proposals will be received until April 3 for the construction of a filter plant at water-works of city; plant to have guaranteed capacity of not less than 2,500,000 gallons every twenty-four hours; also for a filtering crib to be placed in river (subject to United States authorities), with guaranteed capacity of 3,000,000 gallons per twenty-four hours. Plans and specifications to be submitted with proposals. Certified check on some national bank for \$500 must accompany each proposal. Address C. H. Turner, mayor of Parkersburg, W. Va.

Flour Mills and Flouring Machinery.—E. S. Dobbins, Farmington, Ga., is in the market for roller process flour mill of small capacity. Thomas Ferguson, Sandymust, N. C., will probably want roller flour mill. Hunter & Lacy, Elizabethton, Tenn., will be in the market for complete 40-barrel roller mill. W. A. Maloney, Jr., Telford, Tenn., wants to correspond regarding the purchase of additional flouring machinery. J. Lee Kolner, Crinora Station, Va., will want complete equipment for flour mill. H. A. Klyce, Dyersburg, Tenn., is in the market for complete flouring outfit for 250-barrel mill. J. H. Gochenour, Rileyville, Va., will want machinery to remodel flouring mill. Robert Ingram & Co., Taylorsville, N. C., will be in the market for flour mill.

Forge (Portable).—Box 23, Florence, S. C., wants a portable forge.

Foundries.—See "Oil-mill Machinery."

Foundry (Steel).—R. Martin Sugar Co., Ltd., Ruth, La., wants addresses of foundries turning out small steel castings.

Foundry Equipment.—See "Bridge Works" and "Machine Tools."

Foundry Equipment.—Joliet (Ill.) Stove Works wants a cupola blower with engine connected by sliding base (of size equivalent to 7 or 8 Sturtevant).

Foundry Equipment.—"Steam Hammer," care of the Iron Age, New York city, wants a second-hand steam hammer of capacity 1000 to 1200 pounds blow, in first-class condition; give full particulars in first letter.

Foundry Equipment.—G. A. Schaal, 619 Water street, Baltimore, Md., wants addresses of makers of small blast-heating furnaces for welding iron and steel for small forge shop.

Foundry Equipment.—"Bar Mill," care of the Iron Age, Hamilton Building, Pittsburg, Pa., wants 10-inch three-high bar mill; 18-inch three-high bar mill, and a heavy squeezer; state where can be seen and price.

Furniture Machinery.—Chas. R. Howard, 71 Piedmont avenue, Atlanta, Ga., wants prices on machine for manufacture of chairs, tables, etc.

Handle Machinery.—Ross J. Leary, Box 42, Franklin, Va., is in the market for broom-handle machinery.

Hardware.—John J. La Taste, Aiken, S. C., wants to buy hinges and butts of which the leaves are composed of circles or segments.

Heating and Ventilating Apparatus.—Treasury Department, office supervising architect, James Knox Taylor, Washington, D. C., will receive proposals until April 26 for furnishing the heating and ventilating apparatus, complete in place, for the United States custom-house and postoffice building at Bristol, Tenn., in accordance with drawings and specifications, copies of which may be had at this office or at the office of the superintendent at Bristol.

Hoisting Equipment.—O. F. Wyrick, secretary and treasurer of the Lone Star Gold Mining & Milling Co., Sherman, Texas, is in the market for a steam hoisting outfit; unloading point Calumet, near Salida, Colo.

Heating Plant.—T. A. Crews, treasurer Loves M. E. Church, Walkertown, N. C., wants to communicate with manufacturers of hot-air furnaces.

Hydraulic Press.—Alex. Menke, 15 and 17 Greene street, New York, wants hydraulic press from 100 to 300 tons pressure.

Hydraulic Pumps, etc.—Tarver Waddell, Helena, Ark., wants to correspond with parties having hydraulic outfits, including pumps, flumes, etc., for grading purposes.

Ice Machine.—Wanted.—Ice machine of six to ten tons capacity, brine system. Address, stating price and full particulars, P. O. Box 16, Fall River, Mass.

Ice Machine.—Apalachicola Water-Works Co., Apalachicola, Fla., is in the market for a five-ton ice machine, complete, with exception of steam plant; second-hand machinery will be considered.

Ice Machines.—Corinth Compress Co., P. L. Green, superintendent, Corinth, Miss., wants to correspond with makers of ice machines.

Ironworking Machinery.—See "Lathe."

Ironworking Machinery.—See "Bridge Works."

Iron Works.—See "Nut Machinery."

Lathe.—H. C. Macdonald, 155 Broadway, New York city, wants to buy a small foot-power lathe for turning wood and iron.

Lumbering Equipment.—Robert Louis, 1721 Carondelet street, New Orleans, La., wants steam nigger, gang edger, log haul-up and chain.

Machinery.—Geo. H. Brush, Ridgely, Tenn., wants to correspond with machinery manufacturers relative to having a patent cornstalk-pulling machine manufactured.

Machine Tool.—"J. D. W.," 179 Dean street, Brooklyn, N. Y., wants six or seven-inch steam hammer for shop.

Machine Tools.—See "Engine Lathe."

Machine Tools.—See "Forge (Portable)."

Machine Tools.—See "Boilermakers' Tools."

Machine Tools.—E. Keeler Co., Williamsport, Pa., is in the market for a good second-hand flanging press.

Machine Tools.—E. A. Hibbs, Quarry and Broad streets, Philadelphia, Pa., wants a set of hand-bending rolls, six to seven feet long, six inches diameter.

Machine Tools.—Lawrence Bolt and Iron Works, rear of 422 East Pratt street, Baltimore, Md., is in the market for bolt headers, bolt cutters, trip hammers, drill presses, etc.

Machine Tools.—Crookston Iron Works, Crookston, Minn., wants iron shaper of not less than 14-inch nor more than 24-inch stroke, with countershaft, vise and centers; send full particulars.

Machine Tools.—Chesley Machinery Co., Havemeyer Building, New York city, wants lathe, eight to nine-foot swing, 10-foot center; planer eight feet wide, 20-foot table, and slotting machine, 10, 12 or 14-inch.

Match Machinery.—C. B. Lee, Fitzgerald,

Ga., wants prices on machinery for manufacture of matches; also full information regarding the industry.

Masonry.—See "Crematory."

Mining Equipment.—Cherokee Mining Co., Langdon, Ala., wants to correspond with manufacturers of mining machinery relative to purchasing washers, screens, conveyors, separators, tram cars, crushers, etc.

Nut Machinery.—"Bolt and Nut Manufacturer," care of the Iron Age, New York city, wants machines for manufacturing finished cold-pressed nuts for three-sixteenths-inch, one-quarter-inch and five-sixteenths-inch bolts; give full particulars in first letter.

Oil Mill.—Pendleton Oil & Fertilizer Co., Pendleton, S. C., will want all the machinery for a 20-ton cotton-oil mill complete. Address Miles M. Hunter.

Oil-mill Machinery.—Soule Steam Feed Works, Meridian, Miss., wants to contract for the manufacture of chilled grinder plates for cottonseed hullers.

Paper-pulp Mill.—J. G. Paty, Shreveport, La., wants full information regarding manufacture of paper-pulp mill, prices of machinery, etc.

Piping (Terra-cotta).—Town of Branchville, S. C., wants to buy terra-cotta piping of second grade, twenty-four inches and under in size, in carload lots; quote prices delivered. Address A. C. Bruce, clerk.

Plaiting Machine.—A. M. Keen, 1312 F street, Washington, D. C., wants a 40-inch knife-plaiting machine, new or second-hand.

Planing Mill.—Woodward Contracting & Lumber Co., Augusta, Ga., will need a set of planing-mill machinery, new or second-hand.

Planing Mill.—T. Oregon Lawton, Estill, S. C., wants prices on planing mill, matching and molding attachments, etc., new or second-hand.

Plating Machine.—Box 16, No. 153 Broadway, Brooklyn, N. Y., wants to buy accordion and side-pleating machine.

Press.—See "Machine Tools."

Printing Machinery.—John W. Avirett, 5 South Mechanic street, Cumberland, Md., wants to buy a second-hand two-revolution cylinder press.

Pump.—See "Boiler and Engine, etc."

Quarrying Machinery.—P. E. Bisland, Lone Grove, Texas, wants to correspond with makers of soapstone quarrying and finishing machinery relative to buying equipment.

Railway Construction.—Ohio Valley Electric Railway Co. will receive bids until March 31 for construction of about eight miles of electric railway between Kenova and Huntington, W. Va. Plans, profiles and specifications can be seen at office of Ashland & Carlellsburg Street Railway Co. at Ashland, Ky.; Gilmer Brown, chief engineer of railway company.

Railway Equipment.—Stony Creek Lumber Co., Tacoma, Wa., wants four logging cars, 36 gauge.

Railway Equipment.—D. J. Evans, 96 Jackson street, Chicago, Ill., wants thirty second-hand W. P. 50 railway-motor equipments; also fifteen to twenty extra armatures for same; quote lowest price f. o. b. Chicago or point of shipment.

Roller.—C. H. Norton, Durham, N. C., wants to buy a hand roller.

Roofing.—See "Crematory."

Roofing.—Clark-Danforth Handle Co., Lawrenceville, Ill., wants bids on iron roofing for two-story frame building 100x60 feet.

Saw-mill.—Box 133, Montgomery, Ala., wants to buy a second-hand saw-mill and boiler of fifty horse-power.

Saw-mill.—Dasher Lumber Co., Valdosta, Ga., is in the market for saw-mill outfit to cut 30,000 to 40,000 daily; also see "Boilers and Engine."

Saw-mill.—See "Woodworking Machinery."

Saw-mill.—The Pierpont Manufacturing Co., Crescent City, Fla., is in the market for a saw-mill of 20,000 to 25,000 feet daily capacity, with saws, carriage and feed works; also wants a swing saw.

Saw-mills.—C. W. Embler, Walden, N. Y., wants address of makers of band saw-mills or of parties having second-hand band mills for sale.

Saw-mill Machinery.—Seward Trunk & Bag Co., Petersburg, Va., wants to buy a resaw, either band or circular, that will split at least 20,000 feet of inch boards per day.

Shafting and Pulleys.—See "Woodworking Machinery."

Shingle Mill.—"L. P. L., No. 43," care Southern Lumberman, Nashville, Tenn., wants second-hand shingle machine complete.

Soap Machinery.—Alex. Hamilton, manager Cuero Cotton Oil Co., Cuero, Texas, wants to

correspond with competent soapmaker who can furnish plans, etc., for a \$4000 to \$5000 plant.

Spoke and Handle Machinery.—See "Woodworking Machinery."

Steam Hammer.—See "Foundry Equipment."

Steel.—Buena Vista Saddle & Harness Co., Buena Vista, Va., wants addresses of makers of bevel-edge steel, five-eighths inch, No. 11.

Tanks.—Wallace & Moxard, Falmouth, Va., want addresses of makers of large pickle tanks, and of iron-hooped barrels (about whiskey-barrel size).

Time Recorder.—P. O. Box 231, Baltimore, Md., wants to buy a time recorder (Bundy); state style of machine, price and number of keys.

Wash Machine.—L. Deutsch, 162 East Fifty-third street, New York city, wants to buy second-hand small-cylinder wash machine; send description and price.

Washing Plants.—See "Mining Equipment."

Water-works.—W. J. Rice, Morehead, Ky., wants to correspond with manufacturers of water-works equipments, such as piping, pumps, dynamos, etc.; also wants to hear from contractors.

Well-boring Equipment.—The State of Mississippi will purchase a well-boring outfit. Address J. L. Power, secretary of state, Jackson, Miss.

Windmills.—Nelms & Wise, Nelms Building, Newport News, Va., wants names of parties handling windmills.

Wood-pulp Machinery.—James B. Hill, Rome, Ga., wants addresses of manufacturers of wood-pulp machinery.

Woodworking Machinery.—See "Lathe."

Woodworking Machinery.—See "Planing Mill."

Woodworking Machinery.—See "Boring Machine."

Woodworking Machinery.—See "Furniture Machinery."

Woodworking Machinery.—See "Handle Machinery."

Woodworking Machinery.—W. N. Hayes, McCreeseville, Ala., wants prices on spoke and handle machinery, including bolting, rip and cut off saws.

Woodworking Machinery.—King Lumber Co., Charlottesville, Va., is in the market for box-board or hand matching machinery; good second-hand will answer.

Woodworking Machinery.—Clark-Danforth Hardie Co., Lawrenceville, Ill., wants bids on engine and boiler of 80 to 100 horse-power, dryroom, shafting, belting and pulleys, elevator mortising machine, panel-raising machine.

Woodworking Machinery.—H. F. Lewis & Co., Limited, 2729 Carondelet street, New Orleans, La., want to buy tenoning machine, double head and double cope; medium-weight mortising machine, panel-raising machine.

TRADE NOTES.

To Manufacturers.—Manufacturers seeking location for plants are invited to an exceptional opportunity now offered in a Pennsylvania city. For particulars address "Bullock," 150 Nassau street, New York.

Timber and Mineral Lands.—H. S. Rucker of Buena Vista, Va., is offering for sale 25,000 acres of white-oak timber land; also rich in mineral. Property is in the celebrated Oriskany ore district of Virginia.

Factory Site.—N. W. Boew of No. 4 North Eleventh street, Richmond, Va., is offering for sale an excellent factory site. Property has over 50,000 square feet of space, possesses 160 horse-power free of charge, railroad facilities, etc.

Water-power and Land.—D. P. Oglesby of Elberton, Ga., is offering for sale a water-power and 300 acres of farming lands located in his State near the Seaboard Air Line. The property is adapted for manufacturing purposes.

Manufacturing Site.—Messrs. Yarbrough & Davis of Nashville, Tenn., are offering for sale a manufacturing site. This site has water-power and railroad facilities at hand; is also located in midst of supply of hickory timber.

Dixie Tannery.—Dixie Tannery, at Bristol, Tenn., has recently increased its capacity 50 per cent., bringing it up to 90,000 hides per year. This tannery is the Southern plant of Messrs. Chas. A. Schieren & Co. of 45 Ferry street, New York city, manufacturers of oak-leather belting and lace belting.

Heating and Ventilating.—The Link Machinery Co. of Erie, Pa., has received con-

tract from J. E. Marshall & Sons of Baltimore for placing heating and ventilation system in a new hospital to be built at Rocky Mount, N. C. The importance of heating and ventilating in a building of this character makes the fact that the Link Company has this contract a strong recommendation of the Link Company's system.

Apollo Reference Book.—The second edition of this reference book has been issued by the Apollo Iron & Steel Co. of Pittsburgh, Pa., manufacturer of guaranteed galvanized sheets, cold-rolled, smooth-finished black sheets, corrugated sheets, etc. The booklet contains a lot of valuable information in relation to the sizes, weights and other particulars of the metal sheets, etc., referred to above; also blank pages for memorandum purposes.

Veneer Machinery, etc.—The veneer machinery and the gasoline engines of the Blakeslee Manufacturing Co. are becoming more widely known every day. This company has a plant at Birmingham, Ala., where it produces a line of iron specialties and machinery, for which there is a constantly-growing demand. The most recent shipments of the company's machinery included one to Mexico, consisting of a carload of gasoline engines; another shipment was three carloads of veneer machinery to different points throughout the United States.

Wood-Split Pulleys.—Wood-split pulleys are a comparatively new feature. They have rapidly made their way into general use in the mechanical world. Their merits and advantages as compared to other pulleys have more than satisfied the thousands of manufacturers who have installed them in their plants. The Ohio Pulley Co. of Marion, Ohio, is one of the wood-split-pulley manufacturers whose product has found a wide use. This use is constantly enlarging as more factory operators become cognizant of the merits of the pulleys. The company has issued a new booklet relative to its pulleys.

Electric-Lighting Supplies.—At this season of the year, when all lighting plants are contemplating improvements and extensions, the house that is able to fill orders on shortest notice with the best class of material is the one which should secure the business. The Western Electrical Supply Co. of St. Louis can fill orders in that manner. The company has secured the agency for Williams' electric time switch, which is something to be appreciated by all central stations. It will cut out automatically fan circuits, lights or motors, and can be locked so it will not be tampered with. Absolute certainty can then be had as to the time a customer is using current. The Western Company will be pleased to send catalogue and descriptive matter on application.

Bliss Exhibit at Paris.—The E. W. Bliss Co., the well-known press and die maker of Brooklyn, N. Y., is now shipping to France over one hundred cases of its machines for exhibition purposes, both at Champ de Mars and at Vincennes, during the coming Paris Exposition. The weight of these machines will be about 200,000 pounds. Among the interesting machines which the company will exhibit is an automatic can body forming and lock seaming machine, a new style toggle drawing press, an automatic notching machine, spinning lathes, single-action presses, double-action presses, drop hammers, double-crank presses, heavy punching presses, screw machines for sheet-metal screws, power squeezers, shears and many other machines of particular interest to those who make articles from sheet metal. The Bliss Company's exhibit will also contain a large number of machines specially adapted for the manufacture of armature discs and sections.

Pittsburg Feed-Water Heater Co.—A charter was granted March 14 under the laws of the State of Pennsylvania to the Pittsburg Feed-Water Heater Co., Pittsburg, Pa., for the manufacture of feed-water heaters, etc. James Bonar is president; J. E. Schlieper, treasurer and general manager, and Jos. Cawley, secretary. The sales department will be under control of James Bonar & Co., Pittsburg, Pa., as heretofore. The company will manufacture both the "Pittsburg feed-water heaters and purifiers" and the "Pittsburg tubular feed-water heaters." These heaters have been in use for the last six years, and are being adopted by some of the leading steam users. The Carnegie Steel Co., Limited, alone installed over 50,000 horse-power, and there being 500,000 horse-power in use throughout the United States, it is the intention of the company to push the sale of these heaters to greater extent than in the past, and the company is desirous of making connections with different

concerns throughout the United States to take hold of the product for various sections.

Addison C. Rand.—Mr. A. C. Rand, president of the Rand Drill Co., died on March 9, after an illness of a day; his age was fifty-nine years. Mr. Rand's death will be deeply regretted by his business associates and the trade. Mr. Rand's name will always be linked with the development of rock-drilling and air-compressing machinery. He was one of the first in this field of work, and guided its growth from the smallest and most uncertain beginnings to its present large proportions. While much work with drills had been done at the Hoosier tunnel before his connection with the industry, it is well known that their use then was only possible because that enterprise had the State of Massachusetts behind it. The real use of rock drills in civil engineering work, and on an economic basis, began with the Rand drills at the West Point tunnel of the West Shore Railroad, though the Haverstraw and Weehawken tunnels soon followed. Following this came the tunnels of the abandoned South Pennsylvania Railroad, and soon after the Washington and New York aqueducts. It seems impossible that an appliance, without which no large work of this character would now be attempted, could have been of so recent origin, but such is the fact. Machine drills became an accepted fact in mining before they did in civil engineering work, the place of their birth in an economic sense being the iron mines which center about Port Henry, New York, though the iron and copper regions of Lake Superior district soon followed.

Keep Your Powder Dry.—"Trust in God and keep your powder dry" is a saying attributed to various personages from Oliver Cromwell down, and one which has not only proved pertinent in battle, but also in field sports. In olden days of flint lock and powder pan the necessity of keeping the priming dry was truly apparent, while with the modern sporting piece and nitro explosives it has proved no less a valuable instruction, for smokeless powders have always heretofore been deficient in one quality, that of stability. This last feature has spoiled many a sportsman's outing, his nitro powder absorbing dampness from the atmosphere and forthwith deteriorating in strength. With a view to producing a powder which would be free from this defect, the Laffin & Rand Powder Co. began developing the ideas of its most experienced chemists, submitting each batch of powder turned out to the most severe tests of dampness, until at last it settled upon a formula which produced an absolutely waterproof smokeless powder. This new nitro is manufactured at Pompton Lakes, N. J., where the smokeless mills of the Laffin & Rand Company, numbering eighty-eight separate buildings, and all filled with the most up-to-date machinery, are located. Thousands of pounds are sent out to supply the sporting trade, while even greater quantities go to the big cartridge factories and the United States arsenals, for Uncle Sam thinks very well of this powder for both cannon and small arms. Besides being waterproof, this powder has another quality of particular merit, that of uniformity of grain. Every grain is of exactly the same size, there being no small particles of dust to settle at the bottom and thus cause irregularity of shooting. This exactness in size is obtained by cutting into grains, and not crushing or grinding under rollers, as are some powders. The Laffin & Rand Company has manufactured powders nearly a century, and its plants are in half a dozen different States, but only within the past year or so has it manufactured smokeless powder. This delay was occasioned by the company's determination to do no experimenting at the expense of the public, but to be absolutely certain that its new product was perfect before placing it on the market. That this powder was not affected by dampness and age was proved at Madison Square Garden during the Sportsmen's Show, when J. S. Fanning, shooting in the roof tournament, broke 175 targets without a miss, and made considerably above 50 per cent. on breaks in 300 shots fired. The shells used were loaded with Laffin & Rand smokeless powder which for two years had been stored on a barge in New York bay. That they were exposed to damp all of this time was evidenced by the fact that the shells had swelled so badly that it was with difficulty they could be forced into the gun, but in spite of this they were as quick and hard hitting as powder fresh from the mill, while in the entire number of shells fired there was not the slightest irregularity. This was a most severe test for nitro powder, and its successful conclusion proved that while "trust in God" may still be quite as essential as it was in the days of Cromwell, it is no longer necessary to worry about keeping your powder dry.

Cottonseed-Oil Notes.

The Pendleton Oil & Fertilizer Co. of Pendleton, S. C., was chartered last week, with a capital stock of \$20,000. The company will manufacture oil and cottonseed meal. The incorporators are W. M. Hunter, J. J. Sitten and S. L. Eskew.

A meeting was held at Rocky Mount, N. C., on the 16th inst. by the stockholders of the Fair Association and other citizens, and a company organized to manufacture cottonseed oil and fertilizers. Stock to the amount of \$10,000 was subscribed, which will be increased to \$40,000. A mill will be built at once.

The Union Cotton Oil and Meal Works of Kansas City, Mo., has purchased the old Allcutt Packing Company's plant in Armourdale. This plant will at once be fitted up for an up-to-date oil mill of 120 tons capacity at a cost of \$100,000. Contracts have been closed for the machinery, and it is expected that the new mill will be in operation by September 1.

The board of directors of the North Mississippi Oil Mill Co. met on the 12th inst. at Holly Springs and completed the organization of the company by the election of E. L. Withers, president, and Addison Craft, secretary and treasurer. It is the intention of the company to begin the erection of the buildings as soon as plans and specifications can be drawn and contract closed. Payment of 50 per cent. of the stock is called for by the 31st inst.

A meeting was held at Gittings, Texas, on the 10th inst. for the purpose of organizing a cottonseed-oil mill company at that place. The promoters of the enterprise succeeded in securing subscriptions to the amount of \$30,000. The stockholders elected the following directors: E. A. Falke, J. J. Fariss, W. E. Williams, M. Schurman and W. H. Cherry. The erection of the plant will commence as soon as practicable, so as to be ready for operation at the opening of the next crushing season.

The market for crude and refined cottonseed oil at Texas points has ruled fairly active during the past week. In crude oil holders are disposed to offer stocks more freely rather than carry over until next season. Values are slightly easier, prime crude oil, loose, being quoted 28½ to 29½ cents, and prime summer yellow 32½ to 33 cents; linters, per pound, 4½ cents, all f. o. b. mill at interior points, according to location. Cottonseed cake and meal have ruled very steady, with a good export demand. Cake is quoted \$22 to \$22.25, and meal \$22.25 to \$22.50; bulls, sacked and baled, \$4 to \$5 per ton, all delivered at Galveston. Houston mills are paying \$13 per ton for cottonseed f. o. b. interior towns.

There is a steady tone to values at New Orleans for both crude and refined cottonseed oil, and shipments of the latter for the present month will be heavier than usual. The total foreign shipments of cottonseed oil for the season to March 8 aggregate 5,277,200 gallons. Cake and meal are in good demand for export, and values steady. The following are receivers' prices: Cottonseed, nominal per ton of 2000 pounds delivered here for good, sound seed, including sacks; cottonseed meal jobbing per carload at depot, \$21.50 per short ton of 2000 pounds; for export per long ton of 2240 pounds f. o. b., \$23.75; oilcake for export, \$23.75 per long ton f. o. b.; crude cottonseed oil at wholesale or for shipment, 31 cents per gallon loose f. o. b. tanks here; in barrels, 33½ cents; cottonseed hulls delivered per 100 pounds, according to location of mill, 20 cents; linters, according to style and staple—A, 3½ to 4½ cents; B, 2½ to 3 cents; C, 2 to 2½ cents.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Southern Bank Clearings.

The reports of the bank clearings for the second week in March, as compiled by the Financial Chronicle, show that the increase in the Southern cities amounts to 27.3 per cent. This was 12 per cent. greater than in any other portion of the country, the average of all being a decrease of 12.2 per cent. The aggregate clearings in the group of Southern cities was \$87,798,000, an increase of \$20,000,000 over the corresponding week for 1899, and \$30,000,000 over the corresponding week of 1897.

A Prosperous Company.

The Carolina Loan & Investment Co. of Greenville, S. C., has decided to increase its capital stock to \$100,000 on account of its enlarged business. It has recently declared a semi-annual dividend of 3 per cent. Mr. Frank Hammond, president of the People's Bank of Greenville, has been elected president of the company.

New Corporations.

Arrangements are being made to organize a national bank at Petty, Texas.

A company is being formed at Meridian, Miss., to do a fire-insurance business, with \$100,000 capital stock.

H. C. McQueen of Wilmington, N. C., and others are reported as organizing a savings bank in that city.

The Watson Banking Co. of Watson, Mo., has been organized by A. L. McPherson and others of Tarkio, Mo.

J. F. Cook, W. B. Folsom and others have secured a charter for the Merchants' Bank at McTae, Ga., with \$25,000 capital stock.

F. M. Butt and others are interested in a new insurance company in South Carolina, which will have its offices at Hamburg.

George P. McGaw and John E. Davis are interested in the People's Trust Co., which is being organized at Baltimore with \$10,000 capital stock.

The banking-house of Conway, Jordan & Garnett of Fredericksburg, Va., will take advantage of the law relative to national banks and obtain a charter.

The Century Insurance Co. has been organized at Baltimore by John T. Morris, W. T. Weedon and others. The authorized capital stock is limited to \$500,000.

M. F. Kennedy and C. J. Redding are interested in the Shamrock Building and Loan Association, recently organized at Charleston, S. C., with \$120,000 capital stock.

A charter has been granted to the Farmers and Merchants' Bank of Newbern, Tenn., recently organized by J. D. Cole and others with \$30,000 capital stock.

Charles W. Becker and Henry W. Straus are interested in the Consolidated Trust & Finance Co. of Maryland, which is being formed at Baltimore with \$250,000 capital stock.

The Merchants and Planters' Bank of Carrollton, Ga., has made an application to organize as a national bank under the provisions of the legislation recently enacted by Congress.

The Rockingham National Bank, recently organized at Harrisonburg, Va., has opened for business with A. M. New-

man, president, and W. J. Dingledine, cashier. It is capitalized at \$50,000.

A bill is pending in the Maryland legislature to incorporate the Hagerstown Fidelity, Trust & Deposit Co. of Hagerstown, Md. Among those interested are William Kealhofer and Alexander Neill.

The First National Bank of Marlinton, W. Va., has been chartered, with \$25,000 capital stock. This is the first bank in West Virginia to be organized under the new law allowing national banks to be formed with the capital indicated.

A bill is pending in the Maryland legislature authorizing the formation of the Investment Trust Co. of Baltimore County. It is to be capitalized at \$100,000. Among those interested are Edgar G. Miller, Jr., and Richard P. Pleasants of Baltimore.

New Securities.

The city of Jackson, Miss., will receive bids until April 3 for \$10,000 in bonds for bridges. Oliver Clifton is city clerk.

The Charleston Savings Institution at Charleston, S. C., has decided to increase its capital stock from \$30,000 to \$100,000.

The town of Oxford, Miss., has voted in favor of issuing \$20,000 in bonds for improvements. The mayor may be addressed.

Bids will be received until April 7 for the issue of \$10,000 in 5 per cent. bonds of Cambridge, Md. The mayor may be addressed.

N. W. Harris & Co. of Chicago have purchased the issue of \$50,000 in 6 per cent. bonds of the town of Union, S. C., paying 114.35.

The Realty Trust Co. of Baltimore has been authorized to change its title to the Union Trust Co., and to increase its capital to \$2,000,000.

The town of Durant, Miss., has decided to issue \$12,000 in 5 per cent. bonds for improvements. The mayor will give further information.

A bill is pending in the Maryland legislature authorizing the town of St. Michaels to issue bonds for improvements. Address the town clerk.

The town of Bryan, Texas, will vote on April 1 on the question of issuing \$6000 in 4 per cent. improvement bonds. The mayor may be addressed.

Nelson S. Groome, chairman of the finance committee, will receive bids until April 2 for the issue of \$40,000 in 4 per cent. bonds of Hampton, Va.

The assembly of Maryland has passed a bill allowing the town of Hyattsville, Md., to issue bonds for water-works purposes. The town clerk may be addressed.

The First National Bank of Columbus, Ohio, has offered a premium of \$1125 for the issue of \$100,000 in 5 per cent. bonds offered by the city of Newport News, Va.

The Norfolk, Portsmouth & Newport News Railway Co. has given a deed of trust to the Fidelity & Deposit Co. of Baltimore to secure an issue of \$1,000,000 in bonds.

Wood county, West Virginia, is considering an issue of \$350,000 in bonds for road improvements. The county commissioners may be addressed at Parkersburg, W. Va.

It is stated that the town of Pratt City, Ala., is ready to receive bids for its proposed issue of \$25,000 in 6 per cent. bonds for improvements. The town clerk may be addressed.

The legislature has decided favorably upon the proposal to issue \$1,000,000 in bonds for a Statehouse at Jackson, Miss. The state treasurer at Jackson will give further particulars.

The Cane Belt Railroad Co. has registered an issue of \$212,000 in bonds with the secretary of state of Texas. The

bonds are issued on twenty-eight miles of this line between Sealy and Bonus.

The proposed bond issue of the city of Vicksburg, Miss., will amount to \$300,000. It is to be sold for various improvements if authority is given by the legislature. The mayor may be addressed.

Proposals will be received until April 3 for the issue of \$3,500,000 in 3½ per cent. stock to be sold by the city of Baltimore. David Ansbach, president of the finance commission, may be addressed.

J. W. Blackmore, mayor, may be addressed relative to the issue of \$40,000 in water-works bonds, which is to be sold by the town of Gallatin, Tenn. The same town also offers \$10,000 in bonds for electric-light purposes.

Dividends and Interest.

The Hopkins Place Savings Bank of Baltimore has declared an extra dividend of one-half per cent.

The Tennessee Coal, Iron & Railroad Co. announces a dividend of 2 per cent. on its common stock.

The Security Storage & Trust Co. of Baltimore announces an extra dividend of 1 per cent. to depositors in its savings department.

The Union Banking Co. of Douglas, Ga., has declared a dividend of 13 per cent. for the last year. J. M. Ashley has been elected president.

The Savings Bank of Somerset at Princess Anne, Md., has declared a semi-annual dividend of 8 per cent. The bank has decided to issue \$10,000 worth of reserve stock to investors. The shares of this institution are now selling at \$160, although the par value is \$100. Joshua W. Miles is president.

The Sloss-Sheffield Steel & Iron Co. announces a quarterly dividend of 1¼ per cent. According to the company's financial statement, the net profits for the quarter ending February 28 amounted to \$369,561. After deducting fixed charges and the dividend referred to, which is on its preferred stock, a surplus is left of \$194,512.

An Attractive Bond.

The bonds of the Norfolk Railway & Light Co., which is a consolidation of the Norfolk Street Railroad Co., the Virginia Electric Co., the Norfolk & Ocean View Railway Co. and the Berkley Electric Light & Power Co., operating under a comprehensive charter granted by the Virginia legislature, are being offered for subscription by the International Trust Co. of Baltimore, Middendorf, Oliver & Co. of Baltimore and John L. Williams & Sons of Richmond, Va. The combination of these properties has been effected by the banking-houses of Middendorf, Oliver & Co. and John L. Williams & Sons. The International Trust Co. of Baltimore is trustee under the mortgage. Detailed reports of the operations of this company show very large earnings, making the bonds an exceedingly attractive investment.

The destiny of Norfolk as one of the great commercial cities of the world is now universally admitted. As the seaboard terminus of such great systems as the Southern Railway, the Norfolk & Western, the Seaboard Air Line, the Atlantic Coast Line and a number of others, Norfolk has railroad advantages hardly equalled by any other seaport in the country outside of New York itself. In addition to the rapid development of its commercial interests, its manufacturing and trade interests are steadily expanding. The investor in the securities of this company, therefore, has the assurance of a rapid growth of population, thus ever adding to the profit of street-railway and electric-light operations.

TABLE OF CONTENTS.

EDITORIAL:	Page.
Notice!	139
The Iron-Trade Situation in Great Britain	139
The Outlook for Iron	139
The South's Demand for Textile Machinery	139
Safety for Cotton	139
The Real Negro Problem	139
Tennessee Coal, Iron & Railroad Co.	140
The World's Iron Trade Situation and Outlook	140
Brightness at Birmingham	141
Eastern Iron Markets	142
The New Banking Law	142
Stocks of Cotton in American Markets	143
TEXTILES:	
To Manufacture Textile Machinery	143
A \$125,000 Mill at Kosciusko, Miss.	143
\$1,000,000 Mill for Gainesville, Ga.	143
Griffin's \$20,000 Knitting Mill	143
Would Invest in a Mill	143
To Manufacture Combed Yarns	143
A Bleachery Company	143
North Carolina's New Silk Mill	143
For Textile Training	143
The Cotton Movement	141
A \$50,000 Knitting Mill at Henderson, N. C.	144
To Double Its \$60,000 Mill	144
Textile Notes	141
RAILROADS:	
To Shorten Its Route	144
Kansas City to the Pacific	144
West Virginia Electric Line	144
An Important Extension	145
Sale of Kansas City, Pittsburg & Gulf	145
Southern Railroad Earnings	145
Russell Harding as Manager	145
To Be Extended	145
Power from the Susquehanna	145
To Shorten Its Route	145
Extending the South Georgia	145
Along the Red River	145
May Extend to Richmond	145
For Galveston Terminals	145
Railroad Notes	145
Jettings at the Ports	145
LUMBER:	
Lumber Market Reviews:	
Baltimore	146
Charleston	146
Savannah	146
Mobile	146
New Orleans	146
Lumber in Florida	146
Lumber Notes	146
PHOSPHATES:	
Florida Phosphate	147
Phosphate Markets	147
Phosphate and Fertilizer Notes	147
Revival of the Cut Nail	147
MECHANICAL:	
Paint Economy	148
Sandpapering Machine (Illus.)	148
Geared Electric Mine Pump (Illus.)	148
Besly Band Grinder (Illus.)	148
A Successful Lighting System (Illus.)	149
Coaling Vessels at Sea (Illus.)	149
CONSTRUCTION DEPARTMENT:	
New Enterprises	150
Building Notes	152
Railroad Construction	153
Machinery Wanted	154
Trade Notes	155
Cottonseed-Oil Notes	155
FINANCIAL NEWS:	
Southern Bank Clearings	156
A Prosperous Company	156
New Corporations	156
New Securities	156
Dividends and Interest	156
An Attractive Bond	156

Lawn Fencing.—The improvement of lawns frequently includes the erection of such fencing as will tend not only to beautify but also to act as a guard from trespass. In the erection of such fencing what is most required is an article that is light and of low price, yet at the same time stiff and very strong. The strongest and most durable fencing has been found in that constructed of large size plain wire, to which is securely attached a heavy right upright rod or stay at short and regular intervals. It is of the highest importance that these upright stays shall be placed at equal distances from each other, and that they stay in their places. This latter has been accomplished in the Chandlee lock, and the fencing so desirable as above referred to is found in that manufactured by the Chandlee Fence Co. of Baltimore, Md. The Chandlee fencing is built on the same principle as the well-known Chandlee farm fencing, has been thoroughly tested for several years, and the greatest satisfaction is reported by its users. Booklet referring to this fencing or other particulars desired may be obtained on application to the company.